ABOUT THIS ISSUE

Legacies are gifts from ancestors and predecessors. In this issue, we examine generations of Cornellians and their gifts. The U-Halls they left us as class gifts undergo modernization. As we look onward toward the Plantations, a new visage appears on the overlook. Then across the street, the Boyce Thompson Institute research and heralded lecture series guarantee legacies for future generations. We hope you will enjoy this issue.

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The New Newman Overlook
by Michael K. Durand '87

At the end of summer 1987, visitors to the Cornell University Plantations will be greeted with a new attraction that will literally change their perspective on the place — or at least part of it. By that time the redesigning of the F. R. Newman Overlook will be complete, and a new and improved view of the arboretum named after the same man will be available to all.

According to Cornell Plantations Director, Robert E. Cook, the original Newman Overlook's design was "not sympathetic with the organic, curvilinear design of the arboretum," and some "corrective surgery" was needed to improve both its view and aesthetic quality. He explained that the changes are being made in response to the suggestions of the Plantations staff and F. R. "Flood" Newman, '12, who has donated the funds for them.

"We weren't happy with the old overlook because it didn't have a single site of recognition [for Mr. Newman's donations] or the grandeur we were looking for," Cook said.

The old overlook, located at the east end of the arboretum, had problems with its design, the most significant being that the seating did not present a good view of its surroundings. Because its view centered on a large red and white Cornell water tower located nearby, the old overlook did not give visitors a feel for the arboretum, Cook said, adding that "It didn't do justice to the place." Other problems of the old overlook were due to shortcomings of its design. Its angular layout conflicted with the rolling landscape of the arboretum and set it apart from its surroundings. Its bareness made the site unappealing, and its lack of plantings kept it unsheletered from traffic going through the arboretum.

The remodeled Newman Overlook will eliminate these problems and allow visitors to experience the arboretum in a new way. Both its physical structure and the view it offers will involve patrons with the scenery. The overlook will be much larger, consisting of rock walls and seating built into the landscape. It will be accompanied by fresh plantings which will help the overlook blend into the arboretum scenery as well as isolate it from road and pedestrian traffic. The thickness of the proposed plantings will also enhance the overlook's new view by contrasting with the openness of the arboretum.

In addition to these changes, the re-designed construction that is going on now will offer still other benefits to arboretum visitors. Unlike the old overlook, the new design will maximize the view into the arboretum and generate a new perspective by its oblique positioning. Because it orients the viewer to look across the arboretum as well as into it, the new design will make the ponds and arboretum itself seem larger.

Along with the improved view and sense of the surroundings, the new overlook will also provide a more attractive setting for University events. In the past, occasional lectures to students and visitors, as well as Easter sunrise services have been conducted at the overlook site, Cook said. The larger, re-designed overlook will be able to accommodate a larger crowd, and is therefore likely to attract even more events.

The enhanced overlook is a much needed and welcome change to the Cornell Plantations, Cook said. But more importantly, it will provide greater recognition of the generosity of "Flood" Newman, who donated the arboretum and made the new overlook possible.
Redeeming the Bottle Bill

A new bottle bill has been proposed by the state Assembly's Environmental Conservation Committee that would attempt to eliminate some of the problems that have arisen from the first "litter control law" - passed in 1982. A major local force in creating environmental awareness and in propelling legislation designed to protect the environment is Professor Emeritus Dr. Richard B. Fischer PhD '53. He has specialized in environmental education and is widely recognized in New York as a proponent of bottle bill legislation.

Landfills rapidly reaching capacity, roadside litter in mass quantities, chemicals and toxins filtering into the ecosystem and a general concern for the beauty and health of our environment are some major concerns that have prompted state legislation. One particular concern expressed by Prof. Fischer is that all kinds of containers, including disposable bottles, are bottling up massive amounts of space within landfills and tying up much needed natural resources.

Many gains have been made since the original legislation went into effect. In the first year, the Department of Transportation reported savings of $700,000 in roadside litter removal. "As the environment improves in quality, people begin to take more pride in their surroundings and, hence, are more inclined to properly dispose of their garbage," he said.

Much progress has been made in cleaning up the environment through bottle legislation, but it also has been riddled with problems arising from the economic concerns of special interest groups and private "for-profit" organizations. It is one thing to pass legislation to effect a social or policy change and quite another to see it successfully abided by and enforced.

One person who has experienced the difficulties that emerged with the 1982 bottle bill directly is Mrs. Betty McGrew, general manager of Bottle Bert's Redemption Center on Seneca Street in Ithaca. The major obstacles in her business arise when distributors refuse to transport empty bottles out of the community that were originally brought into the area by another distributing company. This leaves her with "shrinkage" or bottles she cannot get rid of and therefore cannot get a monetary return on, Mrs. McGrew said. A legal contract is necessary between manufacturers and distributors before they will haul bottles to their appropriate destination. Other added costs appear in the process of having to return bottles to stores in the area when no distributor is available and the local retailers refuse to take responsibility for product containers sold exclusively by them. This incurs costs which are not reimbursed such as labor costs, transportation expenses, and costs involved in packaging, said Mrs. McGrew.

Although the Redemption Center is designated as a "Registered N.Y. State Redemption Center," the title carries little weight. There is a lack of enforcement and cooperation inherent in the existing bottle bill, said Mrs. McGrew. "I want to serve the public, but it is extremely difficult when I'm faced with so many obstacles."

Some improvements she feels would improve the efficiency of bottle redemption are to increase the handling fee to 2.5 cents, force small distributors to take back a wider swath of bottles and create incentives to make larger stores pick up their own bottles or pay a handling fee. Some of these suggestions are presently included in the proposed Assembly bill.

The new bill, proposed by Ulster County Democrat, Maurice Hinchey, includes provisions that would increase the deposit on throwaway bottles to ten cents, would leave the deposit for reusable bottles at five cents and would create a deposit for wine cooler bottles, said Prof. Fischer. Bottle collectors or redemption centers would receive 2.0 cents per bottle instead of the 1.5 cents they are now receiving.

As the law now stands, retailers pay distributors the bottle deposit. Distributors keep the money from unredeemed bottles. Therefore the distributors are necessarily making some money from the system while other groups are losing profits. The proposed bill would make better use of unclaimed deposits by putting the money into improving the trash recycling systems and in assisting redemption centers in their initial business ventures, said Prof. Fischer.

Locally, where city officials are concerned with the amount of garbage filling up area landfill sites, city officials are considering making it mandatory for individuals and businesses to sort and separate their garbage into "recyclables" and "non-recyclables," said Mrs. Lynn Leopold, Education Coordinator of Ithaca Recyles. They are worried about the amount of cooperation they would receive from the large student population in the area but are hopeful that awareness of environmental concerns and an ecological sense of responsibility would foster positive attitudes and willing assistance toward such a mandate, said Mrs. Leopold.

The bottle bill is a long way from being passed and has many obstacles to overcome especially because many business concerns are represented in the state Senate. But many environmentalists and conscientious manufacturers are in strong support of the new bottle bill. "We have a moral and ethical responsibility to keep the environment preserved," said Prof. Fischer. "Look at what a wonderful place we have to live in!" Any reasonable person would have to agree with Professor Fischer, but industrious individuals should write to their legislators and express themselves in order to see this proposed legislation enacted.
"It's invigorating to get stung first thing in the morning!"

Invigorating? Most people would probably prefer to use the word "painful." Who is this person who seems to like stretching the definition of certain words in the English language? He is none other than Prof. Roger A. Morse '50 MS '53 PhD '55, head of the beekeeping program in Cornell's Department of Entomology in the College of Agriculture and Life Sciences.

Although Professor Morse may not be all that serious about getting stung by a honeybee, he is serious about his work. Presently the only professor of apiculture at Cornell, the beekeeping program is his responsibility.

Anna Comstock, Class of 1886, wrote a book about beekeeping back in 1905, but it was not until 1924 that the ag college got its first professor of apiculture. Since then, the beekeeping program has become one of the most respected in the country, training more professional apiculturists than anywhere else, both here and abroad.

The presence of a good beekeeping program at Cornell makes a lot of sense geographically. This is true not only because New York state ranks tenth in U.S. honey production, but also because it ranks second in apple production, and bees are primarily responsible for apple pollination.

Graduate students involved in the program are usually interested in the different aspects of honeybee management, pollination, honeybee communication and sociobiology, according to Morse. Most go on to become professors of apiculture, professional beekeepers, apiary inspectors or sometimes take positions with the U.S. Department of Agriculture.

How did Morse himself get involved with beekeeping? "I've never done anything else," he said. "My father gave me a hive of bees when I was ten years old. By the time I was 17, I had over 200 colonies, and I thought I would become a commercial beekeeper." Instead, Morse went to Cornell as an undergraduate and then continued on there as a graduate student. The rest, as they say, is history. What was just a hobby for his father became a way of life for Morse.

Morse's beekeeping program utilizes about 100 hives in several different Ithaca locations and an apiculture lab in Florida. The Florida lab is there primarily for research, and researchers give advice and help to the great number of migratory beekeepers who travel south each winter to extend their bees' production season, avoid winter bee loss and introduce new queens into their hives.

The Ithaca hives do not produce much honey, since the surrounding area is not good for honey production, according to Morse, but exist mainly for research purposes. Among the research presently underway are studies aimed at determining the minimum requirements needed for a nest to survive during the winter and finding out which bees in a colony run the hive. According to Morse, it seems that in a colony of 50,000 bees, only a small number of them, as low as one percent of the bees, manage things when difficult decisions need to be made.

The program also has a full-time researcher at the University of Sao Paulo in Brazil who is working in conjunction with their genetics department to study a bee disease known as varroa. It has already hit in Europe, Africa and South America, and the researchers are looking for a way to deal with its impending arrival in North America. There is also a graduate student studying a little known honeybee in Nepal that lives at altitudes of 8 - 10,000 feet, trying to determine its migratory behavior and any new diseases associated with it.

One might think that working with bees requires a high threshold for pain, but Morse claimed that that really isn't true. "You don't get stung much. Through experience, you learn not to make most bee-handling mistakes."

Of the various misconceptions about honeybees, the one that stings Morse the most, so to speak, is that "most people can't tell the difference between a bee and a wasp, especially yellowjackets. Yellowjackets like everything having to do with picnics, and whenever someone gets chased by one, they call us up. People just don't understand what it's all about," Morse bemoaned.

So if you get chased by what you think is a honeybee, make sure it really is one if you plan to call Professor Morse about it. Any other questions you might have about bees, Morse would probably be glad to answer, so go ahead, give him a buzz. □

by David Gershman '87

Taking Care of BEES-ness
After a year of hesitation and debate, the rumble of bulldozers and the clang of piledrivers at the west end of the ag quad assures the rest of Cornell that Academic I will be built. For a while, however, it seemed that Academic I was headed for an entirely different destination. It was headed for Building Limbo.

Many Cornellians know about the buildings that no longer exist on campus, and even more know of the ones that still do exist. But only a select few know of the buildings that never existed; the ones that were designed and planned, but for one reason or another, never set foundation on Cornell soil. Somewhere in the annals of “almost history,” there is an entirely different Cornell; one with its own library, and its own sports and academic facilities, and even its own dormitories.

The creation of this “limbo Cornell” dates all the way back to the earliest days of the University. After Morrill, White and McGraw halls were built in the late 1860s, the administration began to consider the construction of a major library building for the University and where to place it. Under the direction of A.D. White, then a trustee, plans were drawn up to place the library at the east side of the arts quad where Goldwin Smith Hall now stands. The rest of the Board of Trustees, however, preferred a location on the southwest corner of the evolving quadrangle near Morrill Hall.

The issue caused much debate, especially because White had taken it upon himself to have the plans drawn up as he wanted them without consulting with the rest of the board first. Finally, the issue was put to a vote, and the majority decision was in favor of the current site of Uris Library. Thus, the original university library became one of the first Cornell buildings to fade into oblivion. Today, it only exists on the original plans and in the minds of a few historians.

With a rapid rise in enrollment at the turn of the century, the University was forced to make its first big commitment to provide adequate housing for its students. In 1910, Trustee George C. Boldt proposed a plan to build a large group of men’s dorms on a plateau west of the arts quad. The plan was to be implemented in stages, gradually extending a section of more than 20 “gothic castles” over an area along University and Stewart Avenues.

Construction of the first stage of this plan began in 1914 with Boldt Hall, Founders Hall, and Baker Court. However, before the next stage could be begun, war broke out in Europe and the University’s efforts and funds were concentrated on helping in the national effort. After World War I, Mennen, McFadden and Lyon Halls were built and designated as the War Memorial, but Boldt’s original plans were never realized. In another 30 years, these plans would be forgotten altogether with the construction of the University Halls.

Shortly after the men’s dorms for West Campus were designed, it became evident that it would also be necessary to build a residential group for women. A gift of $1,650,000 made by Allen and Janet Jacks Balch in 1928 to be used “exclusively to provide living quarters for women students” made this proposal feasible. The design for the “Balch group” on the north shore of Beebe Lake was just as impressive as the plans for the West Campus dorms. It called for 18 large buildings stretching from Thurston Avenue northward, almost as far as Jessup Road.

Again, because of budgetary restraints and unforeseen circumstances, the project was halted before it was finished. Only one quarter of the actual plans were carried through, only proceeding as far as the addition of Clara Dickson Hall to the North Campus group in the late 1940s.

Residential buildings were not the only ones consigned to Building
Limbo, however. Cornell dismissed several plans for academic buildings as well. In 1925, a number of proposals were brought before the Board of Trustees that dealt with the expansion of the College of Engineering. Sibley, Franklin, and Lincoln halls were originally engineering buildings, and one of the early proposals called for extending this group of buildings along University Avenue on the north side of the arts quad.

At the same time, a building to house the Department of Fine Arts was proposed that would fill the space between Stimson Hall and Sage College, where Day Hall now stands. A large, triangular-shaped gymnasium was also proposed to stand at the present site of the engineering quad.

Before any of these proposals could be put into effect, however, the depression struck America and brought development at Cornell to a standstill. By the time the economic climate became better, in the late 1930s, most of these construction plans had been abandoned. It became evident that the proposed engineering buildings would leave little room for future expansion, and the fine arts building would require filling in Wee Stinky Glen and the creek that runs through it, possibly causing environmental problems. So, in 1938 the newly organized Architectural Advisory Council approved a plan to place the College of Engineering on the south end of the campus, at the site originally chosen for the gym. The men’s gymnasium was then redesigned and put at the current site of Teagle Hall, and the plan for a fine arts building was abandoned altogether, as that department was given the space once occupied by engineering.

By 1946, plans were also set by the Board of Trustees to establish a New York State School of Industrial and Labor Relations. Some preliminary plans for the ILR School included one site at Hoy Field and another above the Law School. In the late 1950s, ILR finally found a home in the buildings that housed the original College of Veterinary Medicine, the site it still holds today.

Over the next 30 years, the University has been more successful with its construction plans. Efficiency and improved planning has cut down on the number of “erased” buildings. That does not mean that all has gone according to plan, however. North Campus has never seen the construction of the two “high rise” dorms designed along with Donlon Hall around 1960. Cost problems affected the 1970 construction on upper North Campus, resulting in the deletion of Low Rise Units number 2, 3 and 4 from the original plan. These three buildings were to stand along Jessup Road, where the CC parking lot now is.

Also consigned to limbo was the conference center proposed by Charles E. Palm, Dean of the College of Agriculture, in 1966. This center was planned for a site on Jessup Road, where the recently constructed Townhouse Complex now stands. It would have consisted of three buildings, housing an auditorium with seating for over 1000, as many as 20 large meeting rooms, and 100 guest rooms. The project was canceled, however, because of the rather high price tag of over $5 million it carried.

Recently, an influx of dollars has kept many planned buildings from slipping away into forgetfulness in the current rash of construction that has seemingly left no patch of soil on our once picturesque campus unturned. But it is hard to predict when economics will decline or war will come again, as it has in the past, and another building will get lost in the cracks and fall into that Cornell campus with the library tower on East Avenue, and the engineering college in the arts quad, and the triangular gym.

Above: A sketch of the original library tower to be built on East Avenue. 
Opposite, left to right: The expansion to the Engineering College proposed in 1925; the original plans for the layouts of Balch and West Campus dormitories (the unconstructed buildings are shown in grey); a sketch of the interior of the proposed Conference Center on North Campus.
On October 10, 1987 you may have noticed people milling around a huge tent on Cornell University's College of Agriculture and Life Sciences quad—some crying, some laughing, some talking, and some hugging. Did you wonder what was happening? Did you want to investigate? If you did, you probably experienced emotional havoc—the good kind, of course—seeing old friends and meeting new ones. It was probably a time for everyone to talk at once—wanting to know everything about the present and yet still wanting to cling to the past. And if you didn't investigate, you're probably wishing that you did. For you missed a chance to revel in the sun, gossip with old friends, and see how your alma mater has progressed. In fact, you missed the seventh annual Alumni ALScapades '87.

According to John Sterling '59, executive director for the Office of Alumni Affairs and Development, the ALScapades was originally called the Alumni Roundup. "The name was changed when the original style of the program changed to include faculty, staff and businesses."

Barbara Littlefair, administrative assistant for the Office of Alumni Affairs and Development added, "Instead of having a roundup of people, ALScapades sounds like more of a fun day."

Even though ALScapades '87 is a time for fun and reunion, it is also a time when the organizers of this event see the tangible results of their one year of planning. It is a time when they will celebrate on a job well done as well as start the plans for the next year's ALScapades.

Littlefair is just one of the many who work "behind the scenes" for the ALScapades '87. Since October 1986, Barbara has attended committee meetings and worked on preparations for the event. In addition, she helped prepare for the Outstanding Alumni Awards banquet, which was held the day before ALScapades '87.

Barbara said her responsibilities for the banquet and the ALScapades included: reserving rooms for alumni, planning the menu, making sure people paid for the events, writing the program, planning the timing for each speaker and various events, and making sure the right people were acknowledged—basically, making sure everything ran smoothly.

Speakers for the morning program were also selected by the committee. Three professors were chosen to speak about "state of the art, upbeat interests." Peter Van Soest spoke on how fiber affects livestock and the human diet; Tom Eisner dealt with neurobiology and behavior; and Douglas Payne reflected on meteorology.

Barbara also had to develop extra activities for those alumni who were not interested in the football game. Four Cornell tours were devised for these people: the Plantations and Beebe Lake, the Equine Center and polo barn, construction at Cornell, and Mann Library and the Supercomputer.

An after-game party was held on the quad after the football game. In 1986, two tents were put up on the quad—one for students and the other for alumni. But for 1987, only one tent was put up to facilitate interaction between all parties.

With all the details Barbara must handle—from ordering ALScapades volunteers. One volunteer planner, Jane Longley-Cook '69, is the chairperson of the 1987 Outstanding Alumni Awards Committee. Jane said the committee met near the end of May to look at outstanding alumni nominations after the May 17th deadline. Three to five alumni are chosen and not all, according to Jane, necessarily have to be Alumni Association members. "I think this spurs them on to become members."

Paul Tilly is another volunteer to the ALScapades cause. Paul is the Chairperson for the Alumni ALScapades '87 committee. Since its first start in 1980, Paul said this event has changed. "It changed each year. From the first one where we had to sit on bleachers in Barton Hall, to the present, we have made very good progress."

And the ALScapades has made "very good progress." From the starting stages in October, when a new committee organizes for the next year's event, to the final stages, when friends get together for some fun, there is no doubt among organizers that the banquet and ALScapades will be successful. For although most will be nervous on ALScapades weekend, all will be able to enjoy the gift of love and friendship they helped bring to their fellow alumni.
The U-Halls. Cinder block walls, bare floors, creaky windows and a single bathroom everyone on the floor is expected to share. Living conditions like these are barely suitable for student housing. But wait, there's hope. Say goodbye to the old U-Halls in their condition of deterioration and welcome to the $18.26 million project for extensive renovations of the six University Hall dormitories.

Picture bright-carpeted rooms with new sliding glass doors, freshly painted, scuff free, sound-proofed walls, three modern and clean bathroom located on each floor, a spacious study or lounge are in the middle of each hallway along with a T.V. lounge located in the center of the floor, a modern kitchen facility, and wood-paneled doors.

This is all a part of a three year U-Hall renovation project to be funded through a New York State Dormitory Authority bond. The project plans to modernize the dormitories' heating and electrical systems and to enhance their appearance. The project calls for upgraded mechanical systems, architectural changes and improved furnishings in the rooms. The size of the rooms will not change, but new furnishings will ensure better use of available space. Loft units similar to those now in Cascadilla Hall will replace the existing furniture. Other changes include faculty-in-residence apartments and areas for fitness activities, music and typing.


Director of Residence Life William P. Paleen stated that due to the new improvements on the U-Halls, the room rents will increase more substantially than before. Paleen said that the room rates for the renovated U-Halls will be greater than for the other U-Halls.

Since the U-Halls were originally named to honor the graduated classes who contributed to the University, Paleen said he thinks those names should be used. For example, U-Hall 2 will be called by its official name of Class of 1928 Hall. Paleen said, "I will try to encourage calling the U-Halls by their class names."

The new and only entrance to U-Hall 2 is now on the ground level behind the building. This floor now serves as a residence life central office for U-Halls 2 and 3 and as a mail distribution center for all of West Campus. West Campus residents will no longer pick up their mail in Noyes Center as they once did. The ground floor also houses bulletin boards, ride boards and offices for faculty.

To enhance the University Hall renovations, the landscape architectural firm of Trowbridge and Trowbridge is working on a plan to improve the ground area surrounding the dormitories. Paleen said U-Halls 2 and 3, 4 and 5, and 1 and 6 will be linked together by entry courtyards.

The renovated dorms will not only be for first-year students but for all students. Paleen said, "We hope there will be a real distribution of new and continuing students in the renovated halls. I expect the renovated facilities in the U-Halls to cause an increase in the number of students who choose to live in dorms after freshman year."

Much of the student reaction to the new U-Halls is positive. Steve DiCamillo '90 pointed out, "I like the renovated U-Halls much better than the old U-Halls."

Some students though, are critical of the different atmosphere the new U-Halls promote. Some of the new U-Hall residents said that they feel some of the changes, such as shorter halls, room doors that close quickly and automatically and dim hall lights are creating a much more mellow, less social atmosphere. Paul Lockwood '90 said, "The social environment has certainly been inhibited. People rarely socialize in others' rooms because the room doors close so rapidly."

The renovations of the University Halls is unquestionably a welcomed and much-needed project. The new halls accommodate residents with better sound conditions and more space. Overall, the improved U-Halls will most likely provide a better housing experience for Cornell students.
"We want to provide cutting-edge science and create a focal point for the frontiers of life sciences," said Dr. Ralph W. F. Hardy, President of Boyce Thompson Institute for Plant Research.

The purpose of the Institute is to generate new science and technology for plants and agriculture with the new molecular biology skills applied to major biological problems.

The Boyce Thompson Institute for Plant Research was founded by Colonel William Boyce Thompson. He believed that advances in plant sciences could have beneficial impacts in the broad agricultural field. The Institute was located in Yonkers, New York until the mid-1970s, when it moved to Cornell.

According to Hardy, one example of the Institute’s major historic accomplishments and impact on agriculture and food was the study of hormones and their control of growth and development in plants. From this research came the first synthetic selective herbicide, 2,4-D or dichlorophenoxyacetic acid, which is still used today. A selective herbicide kills weeds, but not crops.

This year, the Boyce Thompson Institute initiated a Distinguished Lecturer Series in the Life Sciences with the intent to bring to the Institute, to Cornell and to the surrounding community a focus on the excitement from the frontiers of life sciences.

“We are bringing the individuals who are moving the frontiers of life sciences forward, to Cornell and to the broader community,” said Hardy. “We plan to bring 20 individuals per year to spend a day or more with us at the Institute to present a lecture on their field of research.”

One such lecturer was Professor Leroy Hood from the California Institute of Technology, who spoke at Cornell in the spring of 1987.

“Professor Hood is one of the leaders in sequencing the human genome. He is developing systems to chemically define the billions of pieces of information that are contained within the human genome,” said Hardy. “The technology will exist so that within one or two decades, the complete genetic compositions of human genomes will be determined. This same kind of research will be used in plant and animal genome research.”

Dr. Roger Beachy, from the University of Washington, also lectured for the series. Beachy put the genes associated with the tobacco mosaic virus coat into plants. These genetically engineered plants were protected from the tobacco mosaic virus and from other similar viral infections.

“We’ve had outstanding speakers that represent mainstream biochemistry work and research. You might say we invite the people we’ve identified as being stars in their fields,” said Dr. Richard Staples, the Program Director for Plant Stress at Boyce Thompson.

“The lecture series is getting popular,” Hardy said. “The lectures are presented in a manner that people outside of the field can understand. We also have tried a small brown bag lunch seminar, for students only, with each lecturer.”

Some of the fall 1987 lectures have already been scheduled. On October 14, Dr. J.H.M. Thornley, Head of Biomathematics Division of Animal and Grassland Research Institute in England will be speaking about "Modeling Plant Processes, Crop Growth and Response To Environment." Dr. J.V. Kilmartin of the Medical Research Council Laboratory of Molecular Biology in Cambridge, England will discuss "Tubulin and Actin in Yeast," on October 28. On November 11, Dr. Bernard Moss of the National Institute of Health and the Department of Health and Human Services will lecture on "Use of Vaccinia Virus as Molecular Cloning and Expression Vector." Professor Timothy C. Hall, a Distinguished Professor of Biology at Texas A & M is scheduled on November 18, to discuss "Molecular Biology of Plant Virus Replication." Dr. Allen Spradling of the Carnegie Institute of the Washington Department of Entomology will be lecturing on December 2, and on December 9, Dr. Ted O. Diener of Plant Virology of the USDA-SEA will visit. Scheduled for the first lecture of 1988 is Professor Lawrence Bogorad, the Maria Moors Cabot Professor of Biology at Harvard, on January 20.

“I attended one of the spring lectures, and I thought it was fascinating,” said Ellen Hoover ’88. “While I was sitting there listening, I couldn’t help but get the feeling that I was watching history in the making.”

Agriculture and Life Sciences students and the surrounding community have a unique opportunity to be a part of history in the making through the Distinguished Lecturer Series and the innovative research at the Boyce Thompson Institute.
Petite Orscheidt, the Cornell University swim coach, had voiced one wish concerning these two swimming sisters: “I wish I could’ve coached them under a controlled situation, away from the school environment. You just don’t know how good they could’ve been. They could’ve been national champions... maybe... you just don’t know.”

Melba ’89 and Ursula Kurman ’87 are a unique pair. Their heritage, which lies in Estonia of Soviet Europe, has given them quite different kinds of names, but that is not the only thing that distinguishes them. When most adolescents were getting ready for the eleventh grade at their high school in Macomb, Illinois, Ursula, and two years later Melba, were getting ready for their freshman year at Cornell. And while at college, they have developed themselves into integral members of the swim team as well as into the strongest swimmer we’ve had, in stroke, and distance, male or female. And she even got better this year.” Orscheidt said Ursula will be sorely missed when she graduates this year.

Melba still has two years to contribute to the team. “Melba really improved as a freshman,” said Orscheidt. “And although she had a few problems this year (‘86-‘87), I think if she works at it, she could prove to be one of the best women freestylers at Cornell. She has the talent and I hope she lives up to her own potential.”

Swimming is an important part of Hardy’s classes. Hardy ’53, a senior lecturer in the Department of Communication, asserts they are very conscientious students. Some of her other students who are team members aren’t very good about getting their work in when they have meets or matches. But it seems, in terms of school work habits, these sisters are faithful students.

Cornell also holds other aspects that these two women find personally helpful. Coming from a small town in Illinois, it seems Melba and Ursula enjoy the large size of the University. Melba explained that a large school gives them the chance to seek their own space, but they can get together whenever they like. Ursula continued on this idea, having said it’s nice to know that there is a family member, someone who knows you better than anyone else, nearby. If she needs someone to really sit down and talk things over with, she can call up or visit her sister.

But of course, there are always some little things that can be annoying when one has a little or a big sister. For Melba, it is a little discouraging to be introduced as Ursula’s little sister: “I feel sometimes as if I’m expected to live up to her reputation and her accomplishments, whatever they might be.”

Also, be it the odd names or the similar looks, it seems Ursula and Melba are frequently mistaken for one another. The sisters say it doesn’t really bother them, but at times it can get annoying.

Affectionately called “Those Kurman Girls” by their mutual friends, Ursula and Melba are quite a pair. These swimming sisters with the funny names entered Cornell early and have proven themselves more than capable in all they’ve attempted socially, academically, and athletically.

Their success in the swimming pool, especially, has received recognition, but maybe they could have been even better, even faster, even... national champions? Who’s to know?

by Irmgard Kleemann ’87

Ursula and Melba Kurman: sisters in the swim of things.
The event in my life that has probably most affected who I am occurred before I was born. It was when a fertilized egg split in just such a way that two fetuses developed rather than one. I was one, the other was my identical twin brother.

John Angelos '87, in his introductory speech for the ag college's oral communication class, explained his experiences that helped make him the person he is now. Strangely enough, two other members of John's small section were also twins.

Unlike the other twin in his class, John Angelos' twin is also a member of the Cornell community. The brothers are not alone; there are quite a few sets of identical twins who have decided to remain together through their college careers and presently study at Cornell.

John and Stephen Angelos are seniors in the College of Agriculture and Life Sciences. They have lived together during three of their four years as Cornell undergraduates. They plan to share an apartment after graduation as well, since both will remain at Cornell for further study.

"We decided to come to Cornell because it was the best school to accept both of us," said John. "We weren't determined to go to the same school; it just turned out that way."

According to John, since both brothers are in the Department of Microbiology, they took many classes together, especially as freshmen and sophomores. Sometimes professors were confused, and could not tell them apart.

"I must admit that I've enjoyed taking different classes than Stephen in the last couple of years since we've begun to specialize in our own majors," said John.

Jodi and Janyce Wiener '88, another set of twins at Cornell, are juniors, also in the ag college. They have shared a dorm room for the last three years and plan to stay together next year too.

"People always ask us how we can live together," said Jodi, the "older" by five minutes. "It's easy, we're best friends! Our personalities complement each other perfectly. I tend to be a little more serious than Janyce, but in the end we balance each other out."

"Being a twin is the best experience I could ever have hoped for," said Janyce. "It's like having a built-in support system. I know I can always count on my sister."

The sisters said that they decided to go to the same school because they didn't know what the future held.

"It's helped us both academically. Cornell can be very intimidating, but we have each other to lean on. We're
at both very interested in each other’s coursework, and we try to encourage and motivate each other. This is especially true with classes that we take together - we’re taking two this semester,” said Janyce.

The sisters say that although they do not have any problem keeping their identities separate, people get them mixed up all the time. According to Jodi, “A friend of my sister’s once accused her of having a Jekyll and Hyde personality.”

“One, I went to a lecture with my sister,” said Janyce. “About half-way through the lecture, we could feel the professor’s eyes on us. With 300 people looking on, he stopped the lecture and said, ‘You’re twins!’ It was really embarrassing.”

“We don’t like it when people treat us as a unit,” said Jodi, and her sister echoed the opinion. “One negative thing is that people aren’t willing to approach us because they see us as a unit. People are embarrassed because they can’t tell us apart, but it doesn’t bother us. We even answer to each others’ name!”

Not all twins decide to remain as close as the Wiener sisters or the Angelos brothers. Judy Solomon ’90, who studied biology in Cornell’s ag college, and Kristi Levine ’90, who majored in operations research in the engineering college, decided not to attend the same university. However, they both work part-time at Plums, a restaurant/bar in downtown Ithaca.

“I wouldn’t trade being a twin for anything in the world,” said Janyce. “I wouldn’t trade being a twin for any college in the world!” said Janyce, summing up her feelings about her “twinness.”

Whether they are as close as the Wieners or not, most twins admit that the experience of being a twin has profoundly affected their lives.

“When people ask, ‘What’s it like being a twin?’ I always want to respond, ‘What’s it like not being a twin?’” said Leslie. “You see, it’s the only thing we know.”

Leslie and Marje Hahne ‘87 were even born under the sign of Gemini.

Kristi and Cindy Levine ’90 are students in the ag college.
His father went to Cornell, his grandfather went to Cornell, and so did his great-grandfather. He's the fourth Charles M. Thorp to attend this university. He's called a Cornell "legacy."

Charles M. Thorp IV '88 is just one example of the many Cornell students who are descendants of alumni. Legacies at Cornell range from students with one Cornell parent to students who are fifth generation Cornellians.

Christie Fanton '90 is the fifth generation in her family to come to Cornell. Her great-great-grandfather graduated in 1890, and each generation to follow has also produced a Cornell graduate. "My great-great-grandfather was on Cornell's first football team," said Fanton.

When Fanton was filling out her application to Cornell and was asked to list relatives who were Cornell alumni, she had to attach an extra page to list them all in.

Diane Rymph '90 also had to add a page to her application, since she is the sixteenth member of her family to attend Cornell. "Cornell is a big topic of conversation at our family gatherings," said Rymph. "Over break, it was a nice, warm feeling to be able to talk about the places and professors at Cornell with my father, uncles, aunts and cousins. I felt like we all shared a kind of understanding."

Rymph said that ever since she was a little girl, her father wanted her to attend Cornell. "When it came time to apply to Cornell, it bothered me that it was so 'set' for me already," she said. "All my friends were waiting to hear from colleges and deciding which one to attend, whereas I didn't go through that excitement." Eventually Rymph made her own decision that Cornell was the place for her.

"My first semester was tough, but I knew I couldn't go home and say that Cornell was too hard for me, because if generations of my family had made it through, I told myself that I could too," Rymph said.

Unlike Rymph, Thorp did not feel pressured into choosing Cornell. Despite the long line of Charles M. Thorps who attended Cornell, Thorp's father did not press him to keep that line going.

"Actually, my mother discouraged me from coming here because she said the school was too big," he said. "But in the end, Cornell's campus, people and reputation still drew Thorp here."

For Karen Purcell '87, coming to Cornell was the natural thing to do. Both her parents were Cornellians, as were her grandparents, brother, cousins, uncles, aunts and great-uncle Robert Purcell '32 JD '35.

"It never really occurred to me to go anywhere else," said Purcell. "I'd heard so many great stories about mixers, Mom singing at the piano, sledding and all the other good times at Cornell."

Her mother, Jarry Purcell '54, said it was the same for her. "Nobody pushed me to go to Cornell. But when I was growing up I always heard about it and how much everyone loved it, so of course I wanted to go," she said.

Robert Purcell has stayed involved with Cornell ever since he graduated. Now a trustee emeritus, he was the chairman of the Board of Trustees for ten years and was deeply involved with selecting Frank H.T. Rhodes to become the president of the University.

"I love Cornell. And I'd love to see more generations of our family continue to attend Cornell," said Purcell. Because he wanted to bring back one part of Cornell he remembered from his student days, Purcell helped his
great-nephew Colin Purcell '87, revive the Psi Upsilon fraternity.

"It was a nice, distinguished fraternity when I was a member. Later it went through bad times and was thrown off campus. Now they've put the house back in good shape, and I was there for the first initiation," said Robert Purcell.

Traditions seem to characterize Cornell legacies. Rymph said her father, uncle and grandfather all belonged to Alpha Gamma Rho, the agricultural fraternity. As for Fanton, she said her grandparents still come back to Cornell for Homecoming football games.

Legacies like Rymph, Fanton, Thorp and Purcell make up about 9 percent of the students at Cornell. But having a long list of Big Red alumni in the family does not guarantee admission.

"Being a legacy could be a slight help in a close case," explained Coordinator of Admissions for the College of Agriculture and Life Sciences Richard A. Church '64. "But a student has to present strong credentials, whether they're a legacy or not."

"It could probably make a difference if you have four generations of Cornellians who have all been active members of the University community," said Susan Murphy, Dean of Admissions and Financial Aid.

By encouraging legacies at Cornell, the University opens up more opportunities for alumni to make financial contributions. But money is just one reason legacies are welcome according to Murphy. She said that creating a solid network of alumni helps future generations of Cornell students. Legacies create natural networks.

How much of an advantage do legacies have in admissions? Murphy said that of the students who applied to be admitted in the fall of 1987, 29 percent were accepted. Of the legacies who applied, 42 percent were accepted. In other words, the numbers do show a preference for legacies.

"Other Ivy League institutions have a larger percentage of legacies in their student body than Cornell does," said Church.

Instead of seeking an advantage, some students actually hide the fact that they are legacies, according to Church. Rather than list all their Cornell relatives on their application, the students want to see if they can be admitted on the basis of their own academic merit. Still other students are turned off by Cornell because they have heard too much about it, or they want to break out of the family mold.

To target these students, Church said that the university has begun a pilot program that gets in touch with alumni and encourages their high-school-aged children to consider Cornell. It also counsels them on which areas to improve if they want to be admitted to Cornell.

"I had good qualifications in high school," said Rymph. "Being a legacy was an extra boost that I don't know if I needed or not."

Now that she's here, Rymph said that she feels very much at home. "I met another student who's a fourth generation Cornellian and we shared a special kind of feeling, like we really belong here."

That special feeling keeps drawing more generations of legacy families to this campus. Rymph's teenage brother wants to come to Cornell. Fanton's younger sister is thinking about it too.

And Karen Purcell said, "I'd love my kids to go to Cornell. My kids kids, and their kids &quot; It looks like Cornell legacies generate themselves.
by Scott J. Pesner '87

Many college students have no definite career goals upon graduating from school. Nancy Harrison '85 is an exception. "I always wanted to be a television reporter," Harrison said. For now, she has reached that goal.

Harrison is currently a reporter for WBNG-TV in Binghamton, New York and is in charge of the station's Elmira, New York bureau. This position puts her in charge of covering seven central New York state counties. Her responsibilities include generating her own assignments and reporting on at least two stories a day. "I'm responsible for what is happening in the Elmira market," Harrison said. "I find it very exciting."

How does one become a television reporter? "A lot of hard work and experience," Harrison said. According to her, the four years she spent at Cornell was the biggest contributing factor in achieving her career goals. "Cornell was probably the best experience of my entire life," she said. "The biggest help was the social benefits. I met so many different people from so many different walks of life, from different backgrounds and cultures, that it reached me as a person, as a writer and as a broadcaster."

"A lot of broadcasting is psychological," Harrison continued. "As a journalist, you have to understand the person you're interviewing, and it helps to understand where they're coming from. At Cornell, I was able to meet up with so many different kinds of people, it enabled me to understand human beings."

Harrison made the most of her Cornell experience. A communication arts major, she worked at different area radio stations as a reporter. She also hosted a television program called "Cornell on Cable," and during her senior year, she hosted a television talk show for Ithaca College Broadcasting.

Nancy Harrison '85 is on the scene of a story at Cornell.

Harrison said all her work experience in college is helping her greatly now. "My radio experience helped me to develop my voice, my writing and interviewing skills," she said. "The talk show enabled me to work on my air presence. The cable program was a creative exercise—it afforded me the chance to test out some of my ideas and see if they worked."

The most exciting event that happened while she was a reporter at Cornell was the anti-apartheid protests in the spring of 1985. Harrison said, "It helped me out a lot career-wise. It was the first 'spot news' that I had a chance to cover. It was unpredictable and exciting, and it's the sort of thing that happens a lot in the broadcast industry. It was good experience to have under my collar."

After Harrison graduated from Cornell, she worked at two other radio stations in the Ithaca area and then went to an all-talk radio station in Norfolk, Virginia. She started in her current position in October, 1985. "I was overwhelmed when I first took the job," Harrison said. "I really knew nothing about television. At first I thought, 'What do I get myself into? This isn't for me.' But after a while, things began to fall into place. I realized I had to learn and I shouldn't throw the towel in so quickly."

Harrison admits she is still learning and growing as a reporter. She said she continues to observe the news veterans she works with. "It's great to watch the people who know more than I do work and learn from their habits and how they handle things."

Harrison is uncertain about her plans for the future. "It's hard to predict what lies ahead. I would like to stay where I am for a while and continue to learn and grow as a reporter. Over the past year, I've grown to love the business and the last thing from my mind is leaving it."

But Harrison admits there will be a time when she will want to go to even better things. "Down the road, I would like to move on to a bigger market," she said. "I don't think I'm really going to stay in news, but I love producing."

Harrison said in about 10 to 15 years she would like to get into feature film producing. But Harrison is pragmatic. "The odds are against a female film producer becoming successful, but I'd like to give it a shot. If I had one dream, it would be producing."

And anyone who talks to Nancy Harrison will realize that any goal she sets for herself is bound to be reached.
There is never a dull moment for Marcy Dubroff BS '84, MPS '87 at the Cornell University Sports Information Office. "I was a full-time intern so I had a lot to do. I covered individual sports, I did media guides and I did how to be more thorough with your sources. That has been a help because I know where to look now and how things will look in my articles. I can weed out the bad things and decide what is best for my article. The skills I have now I have his job," Dubroff said. Goldberg is now a copy editor for Inside Sports magazine in Illinois and is working on launching his own publication. He and Dubroff still keep in touch. "We still talk and he even

A Good Sport

the crew newsletter. I also did a lot of photography for them and I'm managing editor of the Cornell athlete newspaper. I'm now Assistant Sports Information Director, so it's going to be even more complex," she said.

"The best part of the job is that I can work with sports and get paid for it, but sometimes I want to sleep on Sunday morning and that's just not possible," she said.

Dubroff had worked for a number of area media before getting the job with the sports information office. "I worked for FM 93, The Cornell Daily Sun and The Cornell Alumni News before I came to sports info, and I've been here ever since," said Dubroff.

Dubroff said that her experience as a student at Cornell helped a great deal in her training for the job. "I think as an undergraduate it helped a lot more. Freshman year I took Writing for the Media with Professor Shapiro. He was quite an initiation to Cornell. He was a tough, gruff kind of a teacher and the first paper I got back from him had more of his comments on it than were in my article. By the end of the year I remember looking at myself and saying, 'I can write now,'" she said. "He scared me. He was something else, but he really knocked some grammar sense into me. In my job now I write every day, so it was a big help," Dubroff said.

Her graduate work also helped. "The graduate program was aimed more at research skills to teach you really carry over into my job," she said.

Dubroff's change from student to staff was not all that difficult because she had two things to help her: She had worked as an intern during her senior year and she had Mark Goldberg MS '81. "Goldie was Assistant Sports Information Director when I started working here. He was a good role model. He was also another person who ripped apart my articles. He is one of the best writers I have ever met and he made my copy better. He was also one of the most enthusiastic people I have ever known. He loves sports and he loves writing. It was infectious, I caught it from him, and comes back to Ithaca every couple of weeks for sporting events. I saw him at a lacrosse game last spring. You have to be a little crazy to come all the way from Chicago for a sports event."

Dubroff remembers her days at Cornell through one of her most prized possessions, her camera. "I remember things visually more than anything else. I remember taking pictures of special events. Everywhere I went I had my camera and I took pictures. I have pictures to remember everything. Photography has always been a big hobby of mine," she said. Now, much of Dubroff's work at the sports information office is related to the camera. She can usually be seen at Cornell athletic events on the sidelines snapping pictures for publicity photos, programs or media guides for the following year.

As for her future, her short term plans are set. "I was appointed Assistant Sports Information Director this year so I'm probably going to be around for awhile."

Dubroff has definite plans for her future when she decides to move on from the sports information department. "What I'd actually like to do maybe ten or 15 years down the road is go back to school, get a PhD and I'd like to teach journalism. I love photography and I love writing and I get a real charge out of teaching people," she said.

by Mark Paikoff '88
Have you ever driven a stand?" John Whitcomb '80, director of Farm Services at Cornell and instructor of "Introduction to Farm Techniques" (ALS 027), asked me as I climbed up on the tractor.

"Yup!" I replied as he showed me where the clutch and brakes were. It was my first time on a tractor. "But where is the accelerator?" I asked, feeling more than a little sheepish for being so ignorant.

"Right here," he said, "and this lever puts the plow down." So there I was riding, no, driving a tractor and plowing a field. It was something new and exciting for me, but not to the other students, who were enrolled in ALS 027, because they had been driving tractors every Wednesday for weeks. What a great thing to be able to do at Cornell.

"Introduction to Farm Techniques" (ALS 027) will not be offered at Cornell anymore, however. Whitcomb has just updated the class, and changed its name to "Introduction to Farm Techniques", ALS 127/128. He has also added a credit to the previously noncredit class and introduced new sections to the syllabus focusing on more diverse aspects of farming.

"The objective of the course is not to train farmers," he said, "We want to give students a background in farming skills so they have an appreciation as to what farming is like."

Whitcomb has introduced a section on pesticides and pesticide safety, a trip to two local dairy farms, and a trip to a farm equipment dealer to the class syllabus. He said the trip to the dairy farms gives the students a look at the complete working of a farm and all that is involved in its maintenance. At the farm equipment dealer's, "The students are astounded at the cost of most of the equipment and surprised that most of the equipment is made in Europe or Japan," said Whitcomb.

One student, Karen Cowgill '89 said, "One good tractor costs more than a Mercedes!"

Other changes in the course may eventually include focusing in the fall on dairy cattle and harvesting, and in the spring on planting, beef, sheep and swine. This is not only to work with the seasonal weather changes, but, Whitcomb said, it will allow a more complete look at each type of farming.

Besides just adding to the course, Whitcomb has taken away some of the repetition of sections, like milking cows for only two weeks instead of four, as was done before he took over.

Ward Miller '40, who taught the class for almost 30 years until his retirement in 1985, focused more on just a few farming techniques. One of the first was milking a cow. He explained that they did not work too much with other farm animals because most summer jobs in New York state are with dairy farms.

Miller also included single sections on sheep and swine, poultry and beef cattle. A large amount of time was spent learning to drive a tractor and tractor maintenance. Students drove tractors and plowed fields owned by Cornell's Farm Services.

Both Whitcomb and Miller were especially interested in safety. "Safety is so important because agriculture is the most dangerous occupation in the United States. It usually takes turns with mining in having the highest accident levels," Whitcomb said. "The accident rate in agriculture is four or five times the accident rate of employees in industry."

Each student...
has an employee of Farm Services or the instructor on the tractor when he or she drives.

Learning to drive a tractor was one of the skills originally included in the class because it was designed to teach students only basic skills needed to work on a farm. Miller said that all departments in the ag college once required students to have 40 hours of practical farm experience. This requirement could be waived if a student passed a basic proficiency test. The student had to take ALS 027 if he or she did not pass the test and in order to do so, most often he or she had to have grown up on a farm.

After taking ALS 027, those students unfamiliar with farm techniques could start to get practical farm experience working on a farm for one credit a week in the summer. In the beginning the class was worth two credits towards the required 40 hours of farm experience. Eventually, however, the ag college dropped the two credit hours for the course and most departments dropped their requirements for ALS 027. Students still take the course though. Donna Baccatola '89, a rural sociology major, took the class in the spring of 1987 because, she said, "Once you learn to milk a cow in the United States, you can milk a cow anywhere in the world. I just wanted to take the class to get experience."

Class enrollment has dropped in the last few years. There were only four people in the course in the spring of 1987. The decrease in enrollment was one of the reasons ALS 027 will now be offered for credit, said Whitcomb. Another reason he gave for introducing credit for the course is that the students have to be in class three and a half hours every week.

"It's not that the course is so challenging, but the students have to take a lot of time out of their busy schedules to take it," Whitcomb said, "The price for each credit they take has increased so much that students don't want to give up their time for nothing, and I understand that." Whitcomb just finished his degree in agricultural economics in 1980.

In order to give the students credit, however, Whitcomb had to introduce one more change to the syllabus. He will have the students write a paper on a topic related to something they have done in class. Whitcomb said he tries to help students get jobs on farms in the area whenever he can.

Whitcomb said he hopes the changes in the course will make it more inviting to students. Miller predicted that the class will be filled above capacity if the students react to the class the way they did when he introduced a credit in 1978. "It's an evolutionary process," Whitcomb said, "I'll just have to see what happens."
The bean rust fungus senses by “touch”. It knows just when to infect a bean plant. Prolonged infection may cause the death of a plant.

Scientists at the Boyce Thompson Institute for Plant Research at Cornell discovered that a specific physical feature of the plant leaf triggered the fungus to divide and grow. If scientists apply this new knowledge by producing plants without this physical feature, millions of dollars in future crops may be saved.

Richard C. Staples, program director of the Plant Stress Program at the Boyce Thompson Institute and one of the scientists involved in the projects, described how Dr. Willard Wynn's research in plant pathology in 1967 suggested that the bean rust fungus recognizes the stomate on the leaf of a bean plant and then grows. However, Staples and Dr. Harvey C. Hoch, associate professor from the Department of Plant Pathology at the College of Agriculture and Life Sciences, wanted to know exactly what triggered the fungus to divide and grow. Hoch explained, “Our interest was how the fungus perceives the right moment to make infectious structures. Was the fungus responding to a chemical, topographical or biological trigger point?”

In 1984, Hoch and Staples were able to show that germlings, the first growth of the bean rust fungus cell composed of a germ tube and a spore, responded specifically to a physical structure, the lip of the stomate which measured 0.5 microns high, less than one-hundredth the diameter of a sewing thread. Then the fungus grew the specialized structures. The bean rust fungus senses by “touch” just when to infect a bean plant. The fungus spore treks the terrain of a plant leaf climbing the ridges and valleys in search of a spot to infect. Then it multiplies; the infection burrows downward into the entire plant system.

What it “feels” for is the stomate, the breathing pore of the leaf. Then something in the stomate triggers the germling to develop infection structures. The germ tube swells into a specialized thickened cell that sticks tightly to the leaf surface over the stomate. It sends a peg down into the plant tissue. The fungus acts as a parasite feeding off the nutrients of the bean plant host. It divides again and again. The threads absorb nutrients from the infected plant tissue. Often, the plant dies from the attack.

**What triggers the infectious process?**

Hoch and Staples wanted to study whether the fungus’s infection process was triggered by the leaf terrain. However, “studying a leaf was too imprecise”, said Staples. Therefore...

**Brian Whitehead operates the electron beam lithography machine which etched fine ridges into silicon surface. Later, fungi were grown on the silicon.**
the two scientists sought the assistance of research support specialists Gerald Comeau, Brian Whitehead and Edward Wolf, director of Cornell's National Research and Resource Facility for Submicron Structures for assistance to study how the fungus responded to terrain. They asked Comeau and Whitehead to etch a series of parallel ridges of different heights onto a biologically inert surface—silicon. The ridges resembled heights on the terrain of the bean leaf.

Hoch and Staples dusted spores onto the ridged silicon surface. A spray of mist activated the spores to thread outward. Staples said that the cells responded to the 0.5 microns ridges by nuclear division—growth.

"When we examined the bean leaf with a scanning electron microscope, we discovered that stomata have lips on their "guard cells", exterior structures, that also measure close to 0.5 microns in height. The lip of the guard cell triggered the spore to grow its specialized structure," explained Hoch.

What accompanied the growth of the fungus?
A series of cells grew atop of the stomate. The cell growth then multiplied down under the stomate coding future cell growth to be fungal growth.

How does the fungus disease get into the plant?
Fungi reproduce asexually by means of spores. If you observe a mushroom, spores are the reproductive structures which are found on the underside of the mushroom. Spores travel via air currents or water droplets. At the right condition and humidity level, the spore sends out fine threads to locate the ideal spot to penetrate. The spore must locate this spot within 14-20 hours; otherwise, it will die.

In the past, plant breeders would change the genetic code of plants to make them resistant to disease. However, fungi are virulent forms that quickly change to adapt to new genetic plant strains. Plant strains are subdued by fungi within 7 to 15 years.

Equipped with the knowledge that the 0.5 micron lip on the plant leaf triggers the fungal infectious process, plant scientists at the New York State Agricultural Experiment Station at Geneva hope to develop a breed of "lipless" plants resistant to the bean rust fungus. Without the physical ridge, no fungal growth would be triggered.

"If plant breeders change the plant surface to a lipless terrain, the plant may be resistant to disease for possibly 50 years," said Staples.
When most people first hear about food irradiation, they are likely to believe it is something the Soviets might do to harm an enemy in time of war or something Captain Kirk and crew might find necessary on Star Trek. It is, of course, neither. In fact, it is a process being investigated for use in food processing and preservation. It is not, however, without controversy.

"What we're talking about here is a technology used to preserve food," said John Sebagian, State Coordinator on Nuclear Issues for the New York Public Interest Research Group (NYPIRG). "Radiation is actually applied to the foods themselves. It's a process that utilizes gamma rays from nuclear waste, and that's where you start to get into all the controversy."

Sebagian explained that the gamma rays do not actually stay in the food and make it radioactive. Rather, the radiation causes chemical changes in the food. Advocates of food irradiation say those changes merely help preserve the food; opponents say they damage and poison the food.

Food irradiation is hardly a new idea. "It's something that started back in the 1940s. It was promoted by the Atomic Energy Commission as a neat way of using the developing nuclear technology. Those were the years when we had a lot of Utopians in the government who saw nuclear technology as the wave of the future. Then, in 1963, the Food and Drug Administration approved the use of irradiation for potatoes and other products," said Sebagian.

Does this mean the products you put in your shopping cart, as you move down the aisles of your supermarket, have been irradiated? No. Sebagian said that because of the controversy about the dangers of irradiation, there are almost no products on the shelves that have received the treatment, only a few spices.

Cornell Professor Nell Mondy is conducting research on the effects of food irradiation on potato sprouting. "I don't think there's very much danger of the food being toxic," she said. "That's what we're looking into now."

Mondy works in three departments of the University and in both the agriculture and human ecology colleges. She was reluctant to discuss the results of her work until it is completed and published.

Many people have raised concerns about the irradiation of potatoes and other foods. Often, as the foods are being irradiated, new chemicals are created in them and there are those who worry about the harm that could be caused by those chemicals. NYPIRG's John Sebagian said many of the products created are known carcinogens.

Sebagian also pointed to another possible danger. He said the irradiation process often fails to kill all harmful bacteria from spoilage. It may, however, kill the bacteria that make the food appear and smell spoiled. "You may end up serving contaminated food to your family while not knowing it."

Another question NYPIRG asks is whether the public would be properly informed. "The question is: Would you ever know? The labeling law for irradiated food is very weak. For fruits and vegetables, it involves a little symbol—a flower with a circle around it with the words: 'Treated With Radiation' below—and that's not a very good symbol," said Sebagian. "For processed food in cans, there will be no label at all. No one will understand the controversy."

Sebagian said it may not be long at all before irradiated products appear on the shelves of grocery stores. Meanwhile, at Cornell and across the country, the research and the controversy continue.

Only a few spices currently sold have been irradiated, and foods in the produce department have not been treated. Opponents of the process fear that it may only be a matter of time though.
Warm Memories

George "Doc" Abraham '39 submitted to the Cornell Countryman a very personal reaction to the deaths of two "favorite and renowned" Cornell professors, Drs. Robert Smock and L.H. MacDaniels.

"In 1935, as a timid country boy of Lebanese-American parents with little means, I was determined to make good in my chosen fields at Cornell University. To earn my keep, I found a basement room in the house of a well-to-do matron. I worked in exchange for the privilege of sleeping on a narrow cot in a mostly bare room. A dark hallway led to a sink and a toilet, but I found no shower. After several days I got up the courage to ask where I could take my daily ablutions. Her unexpected reply, 'You can use Beebe Lake,' left me no doubt I needed to find a more desirable place to stay. In a distraught state, I hiked hurriedly up the hill to see Prof. H.H. Whetzel, who had befriended me at registration. After I told him my story, he said 'I have the right place for you! Prof. and Mrs. Robert Smock need just what you have to give—someone to help with their two small children and do some daily household chores in exchange for room and board.' So began my rewarding experience with Bob and Martha Smock.

"It so happened that the Smocks occupied the upper floor of the home of Dr. and Mrs. L.H. MacDaniels. Not only was I to have the privilege of being a student of both Dr. Smock and Dr. Mac, but I was to live for a time under the same roof.

"The test of my baby sitting-light housework prowess came one evening when Dr. and Mrs. Mac had a dinner party in their part of the house, downstairs. I bedded Dr. Smock's kids down for the night and proceeded to do a washing for the Smocks and myself. After loading the washer I settled at the table to do some serious study for a prelim. Within half an hour I heard someone rushing up the stairs and through the partly-open door like a bomb. Bob Smock tore into the kitchen shouting "You're leaking all over the table downstairs!" I had completely forgotten to turn the water off after it had filled the tub. Neither the Smocks, the MacDaniels, nor I ever forgot the episode. It became a favorite joke among us over the years . . . a testimony to their ever-present sense of humor.

"After World War II had finished, I was offered a writing job in Ithaca. Katy and I moved back to Ithaca, having been married in 1942, before I went overseas. The Smocks were the first to welcome us back, and we saw them many times during the two years we were there. We kept in touch after moving to Naples, N.Y., but our visits became less frequent. On the occasions we did return to Cornell, we often found Bob in the orchard. His sense of humor never diminished. Even though Bob had become world-famous for his work, his down-to-earth style never indicated the slightest affectation or self-importance. Quite the contrary, he and Martha continued their work with foreign students and community activities, and the results of their contributions continue to be felt worldwide."

McLellan is studying the effects of different processing and storage techniques on the flavor of fruit juices and on the quality of produce such as applesauce and frozen apple slices. Both men came to the Station in 1981.

Robert M. Pool, a respected grape researcher, was promoted to professor of viticulture. Having served Cornell in both teaching and research, Pool has been active in viticulture at various institutions across the country. He is a recognized expert in grape research from France to the Napa Valley, California, to vineyards in New York. His ongoing efforts in viticulture have helped keep New York producers competitive in world markets.

The Geneva Station is a crucial world resource for genetic progress in grape and apple crops. It preserves a variety of plant materials and makes them available for improvement in agriculture throughout the world.

Cornell Professor Promoted at Geneva Station

Three Cornell professors have been promoted at Cornell University's New York State Agricultural Experiment Station in Geneva, N.Y., which assists in improving New York agriculture, including wine grape crops. Professors Alan G. Taylor and Mark R. McLellan have been named associate professors at the Station, and Robert M. Pool '74 has been promoted to professor of viticulture.

Taylor, a member of the Department of Horticultural Sciences, conducts research on seed quality, germination, and seedling establishment. He also teaches the agronomy course, "Seed Science and Technology."

Kent Thompson, '79 is conducting research at the University of Kentucky that says that extra weight may shorten the racing careers of thoroughbred racehorses.

"A horse's skeleton does not fully mature until the horse is about five years old," Thompson said. "This means his entire racing career takes place on an immature skeletal system." Thompson says that there is no way to speed up the growth of the skeletal system, although many breeders still prefer heavier horses.
For the Alumni

“What ever happened to ______ after graduation? I wonder where he’s working now.” Did you find yourself filling a name into that space? Whether you have been a Cornell alumnus for 30 years or you are still a Cornell student, there are probably a few old friends, apartmentmates, fraternity brothers, sorority sisters, classmates or teammates you have not seen since they graduated. The CALS Alumni Association brings Cornell alumni, faculty and students together through many different activities and programs to renew old friendships and to make new contacts.

“There’s been a strong desire in the last few years to maintain a connection with the College after graduation,” said the Director of Alumni Affairs, John Sterling ‘59. Since 1985 the number of members has grown from 1,900 to over 4,200 due partially to an interest on the part of recent graduates. “The Alumni Association is the leadership group for all the alumni of the college so they can keep contact with the college,” said Sterling. The association also provides many other services to the alumni, students, faculty and the college.

“For the alumni the association provides a benefits package which right now is being reworked,” said Sterling. This benefits package will include privilege cards for Mann Library, a subscription to the Cornell Countryman, discounts on selected Cornell athletic events, Vic Stephen prints, college and local alumni events, motel and car rentals, alumni network and address search services and more. The Alumni Association also recognizes five outstanding alumni every year.

Students also receive many benefits from the association. Starting in 1987 each graduating student receives a wallet size diploma card. The association also provides the outstanding student service award, outstanding academic achievement awards to freshmen, sophomores and juniors and four $1,000 scholarships to freshmen. Working closely with the ALS Ambassador group, a student alumni coordinator and two student directors on the alumni board, the association plans many events such as Dean/Alumni GetTogethers, student recruitment, student grants, career day and more.

By setting up programs such as faculty/alumni reunions, student recruitment and retaining faculty recognition, the Alumni Association aids the faculty and the college. Grants made from the life member fund earnings are provided to departments annually in support of students. This past year support went to the Departments of Agriculture Engineering, Agronomy and Floriculture and Ornamental Horticulture. “We also work closely with the university alumni office on campus-wide events,” said Sterling. For example, the association helps organize Homecoming Weekend, the Alumni Reunion, Alumni Fair — Happily Ezra After, an event that acquaints students with the services and activities available to them after graduation and ALScapades, an event that brings ALS students, alumni and faculty together in campus programs, luncheons, a report from Dean David L. Call and several faculty and other activities.

Despite all these activities, the Alumni Association is continuing to expand their programs and their membership. Many improvements have been made on Agriculture and Life Science News, a publication sent three times a year to 35,000 alumni of the college.

Geographically, alumni involvement is spreading rapidly. Active state coordinators and district directors are leading alumni in many states such as Massachusetts, the greater Washington area, Illinois, New Mexico and Connecticut. Recruitment campaigns are being coordinated through different districts and states. By the end of 1987, Sterling said he expects official membership to be about 5,000. Students receive two years of free membership upon graduation. Membership dues are currently $15 for two years or $200 for life membership.

The success of the Alumni Association will continue to grow. With thousands of active Cornell alumni all over the country, the Alumni Association is able to provide an impressive networking system for publicizing new research at Cornell, helping with student recruiting, aiding in job recruitment, or just finding the address of an old friend. With resources like these, the Alumni Association will help ensure that the College of Agriculture and Life Sciences remains the finest agricultural college in the country.

by Shari Tibbetts ‘87
ABOUT THE ISSUE
This issue gives you a green light to finding out about what is happening at Cornell. We’ll visit with a mother who has taken a detour to go back to college. You’ll see why some Canadians travel across the border to Cornell for an education. We’ll take a look at female faculty members on the road to success. You’ll learn about the different avenues in physical education today. For this and more, put on your brakes and read the Signs of the Times.

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Gender is Not an Issue

As the female to male ratio is rising to the point where there are more women on the Cornell campus than men, the faculty also has increasingly more women aboard. Last year the College of Agriculture and Life Sciences hired six new women faculty members and fourteen new men. Many of these new women faculty have entered fields which have been traditionally filled by men.

Sara Via, pictured on the cover, came to Cornell this past year as an assistant professor in the entomology department. She earned her BA at Duke University in zoology, then received her MSC in neurobiology from the Australian National University, and went on to earn her PhD at Duke University in zoology and genetics. Via is an evolutionary biologist whose work is oriented towards the study of insects and how the process of evolution works. She is one of only two women in the entomology department. "I'm not out to show anybody anything about women," stated Via. "I just want to be known as a scientist." She feels that she brings a skill to Cornell through her science that was not represented here prior to her arrival. "As soon as we stop talking about gender and start talking about science, we'll be better off," she said.

However, Via believes that it is important to realize that times are changing. "It is good that women can become committed to careers and are increasingly able to develop as scholars."

Another faculty member who has just joined the College of Agriculture and Life Sciences is Lois Willett. She received her BS from the College of William and Mary in economics and mathematics, her MS from Dartmouth College in modeling systems and policy analysis, and then went on to earn her PhD in agricultural economics from the University of California, Davis. Willett, an assistant professor, will teach a course entitled "Agricultural Prices" offered in the spring. In addition, she is responsible for researching the pricing of specialty crops throughout New York state.

Willett is one of three tenure track women faculty in the agricultural economics department "which is actually a large number for agricultural economics around the country," noted Willett. She feels that it is a positive move to increase the number of women in fields that have been predominantly male. "It is good to have both male and female role models in academic institutions." She also noted that increasing the number of women in these positions will eventually eliminate the stereotypes that revolve around women.

"In the past, there have been only one or two women role models in particular fields and this is how the stereotypes have evolved. It is important for students to see different women succeeding in different ways. There is not just one correct path to follow to success," commented Willett.

One of the areas that impresses Willett most about Cornell is that the University addressed the issues involving dual career couples. Since Willett is married, this issue especially concerns her.

Marianne Krasny sets up 4-H programs.

Marianne Krasny is also a new member of the faculty in the natural resources department of the ag college. Krasny received her BA from Cornell specializing in the area of human development. She then earned her BS in botany from the University of Washington in Seattle, and later went on to receive her MS and PhD in forest biology, also from the University of Washington.

Krasny's job at Cornell consists of 70 percent extension work, in which she is Program Leader of the 4-H Natural Resource Program throughout New York state. The other 30 percent of Krasny's work is devoted to research dealing with work on sexual and vegetative reproduction of woody plant species.

Krasny is one of two women faculty members in the natural resources department. Like the other new women faculty members, she also feels that the issues surrounding women have moved away from the idea that women are inferior, and are now primarily concerned with family issues such as day care and dual career couples.

As more women enter graduate school, the number of women professors will increase in every field. As one issue is resolved, another problem arises such as the issue of families. Time will provide the answer to that problem.

by Deborah L. Trafton '88
Of Eggs, Genes, and Cornell University researchers are affecting the world in which we live in a variety of ways—especially the world of pets, egg-lovers and plants. Recent breakthroughs for Cornell scientists include an "artificial dog" that breeds fleas for study in a laboratory, a machine that automates deviled egg preparation, and a gene gun that shoots genetic material into plant tissue. These developments have furthered research in the fields of parasitology, agricultural engineering and biology, and may also benefit the consumer in the future.

Fleas may soon cease to bother the living animals that parasitologists Susan E. Wade PhD '81 and Jay R. Georgi DVM '51, PhD '62 use for their studies at Cornell's New York State College of Veterinary Medicine. Instead, Wade and Georgi's "artificial dog," a glass feeder attached to a three-tiered cage, provides an ideal environment for research on Ctenocephalides felis, the common cat and dog flea.

"It's more complicated than you might think to raise fleas for scientific purposes," Wade said. "For one thing, they're difficult to keep track of on living animals, and their eggs fall off on the floor."

With the new apparatus, the fleas move on a wad of animal hair within the top two tiers of the cage. The uppermost tier is positioned next to a parafilm membrane (a substitute for animal skin) which is placed over the inner chamber of the feeder. The feeder is filled with cattle blood, and the fleas bite through the membranes to feed. When they reproduce, their eggs fall through a thin mesh screen to the bottom level of the cage, where they can easily be collected.

Georgi said that he and Wade have raised ten generations of fleas with the artificial dog. The scientists have discovered quantitative differences between fleas raised on the apparatus and those raised on a living animal, but Georgi said that more study needs to be done to determine the extent of the differences. The parasitologists are especially interested in genetic studies of the fleas, as well as the effect of nutrition and chemical substances on their reproduction and development.

The research, which is partly supported by SmithKline Animal Health Products, a division of SmithKline Beckman Co., could derive results that would be useful in developing chemicals to combat the flea. Household cats and dogs, as well as goats, sheep and cattle, may soon be relieved of their allergies to this parasite, thanks to Wade, Georgi, and their new laboratory pet.

Another Cornell invention should relieve some consumers—specifically, those who love deviled eggs but don't have the time to make them. Agricultural engineers Neal Kreher, a graduate student, and Michael Timmons, an associate professor in the agricultural engineering department, have developed a system which easily produces deviled eggs for marketing.

"People are looking for convenience foods, and even though many like deviled eggs, they don't want to go to the fuss and mess of making them," Kreher said.

It was Kreher's hope that a new approach to deviled eggs would help the egg industry. As fewer families eat breakfast together and as more of the negative effects of cholesterol are reported, eggs have been losing popularity. Easy access to deviled eggs, and the fact that Kreher and Timmons' system can remove the cholesterol from their eggs, would ease the effects of these societal changes.

One type of ready-made deviled eggs currently on the market is not produced efficiently and has a tendency to spoil. With the new method, the eggs' yolks and whites are separated, and the yolks are cooked by themselves and placed into a plastic, egg-shaped container full of raw egg white. The white is then cooked around the yolk, and the package is complete—the container doubles as marketing and cooking device. The whole process eliminates the need for preservatives because it takes place at very
high temperatures. Egg Specialties of Interlaken, N.Y. has leased the equipment and is getting ready to produce the deviled eggs, so shoppers in the northeast could be seeing them soon. Picnics may never be the same again.

For those who may not understand the importance of artificial dogs or deviled egg automation, the gene gun of Cornell biologists Theodore M. Klein and John C. Sanford may seem more impressive. Its potential target is not just the Ctenocephalides felis or the egg, but all plant cells and possibly animal cells as well.

The gun, which can shoot gene-carrying metallic particles into plant cells without damaging the cell walls, may be used one day by genetic engineers to improve plants and animals. Already, tiny tungsten particles coated with deoxyribonucleic acid (DNA) from bacteria and ribonucleic acid (RNA) from tobacco mosaic virus have been fired into onion bulb tissue at more than 1,000 miles per hour. Both the DNA and RNA proved to function in the onion cells.

One benefit of this new method is its apparent ability to work with a variety of plant and animal cells. In addition, the gene gun can operate on large numbers of cells at one time. Klein and Sanford's research results, developed at the Cornell-run New York State Agricultural Experiment Station in Geneva, N.Y., can be found in the May 7, 1987 issue of Nature, the British science journal.

These recent techniques developed by Cornell scientists are innovative ways to advance studies new and old. It's difficult to imagine what's coming next from Cornell researchers: perhaps a gene gun that breeds fleas to consume deviled eggs?

by Molly Clifford '88
working with people as opposed to the isolated enterprise of scientific research.

Acceptance is based on evidence using three criteria. A student must be accepted into an appropriate major for the program—chemistry, physics, biology, mathematics or earth science; he or she must have accumulated some kind of relevant teaching experience (e.g. working as a tutor, acting as a counselor at a summer camp); and the candidate must be interviewed by two members of the program staff in an effort to determine one's commitment to teaching.

Assistant Professor Bill Carlsen notes that the goal of the new five-year certification program requires an intensive plan of study. "We're trying a new approach. The people we certify are solidly grounded in the subject matter. The students look at how people learn about math and science, not how they learn to read," said Carlsen.

One of the main points of the science and math teacher certification program is to develop a true understanding of how people think about the subject matter and how they translate their thoughts into solving scientific material such as algebra problems or chemical equations. For example, Fred Pantoja '89 works as an observer for the introductory college math course. During a computer session, he sits behind a student and quietly observes how he or she approaches working on the computer. The objective, according to student journals detailing their experiences, teachers' evaluations in the classrooms and the students' correspondence with faculty after they leave Cornell will act as barometers in measuring the success of the program.

"This is not a one year teacher education program—we have the people for three years," Carlsen commented. "Therefore, there is the opportunity to build bonds between students and schools, have peer support and congeniality among students, and the students can reflect on what the school and teaching experiences are like."

"I'm impressed by the quality of our students—we have serious students who will work well in this program and make good contributions," summarized Trumbull.

MATH + SCIENCE = BETTER TEACHERS

Some students will receive provisional teaching certification after four years. Others will study for a fifth year. At the end of the fifth year, the student will be eligible for permanent certification to teach.

"A lot of people in the Cornell education department have been doing research in science and math learning," commented Trumbull. "Students are not learning math or science well—we're trying to improve teacher education."

Since the teacher certification programs will operate on a small-scale basis until they are further refined and developed, admission is quite selective. Ideal candidates are students who come from scientific or mathematical backgrounds and genuinely enjoy
Imagine what it would be like if all of a sudden we had a thirty percent increase in inflation. Worse yet, what if everyone still had the same income, but just had to pay thirty cents more on every dollar spent? Instead of paying $4.95 for the latest bestselling novel, one now had to pay almost $6.50. Or what if suddenly we found ourselves surrounded by people who wanted to talk about nothing but themselves, and insisted that they knew best about everything? How could anyone survive such a change in lifestyle for an extended period of time?

Fortunately, this is not a situation that most people are faced with, unless they are traveling. However, there is an elite group which has this problem for (at least) four years of its lives: Canadian students in American colleges.

Located only three hours from the Canadian-American border, Cornell hosts approximately 170 Canadians, including both undergraduate and graduate students. Although most people do not realize it, these students are “foreigners” who find several differences between the two countries to which they must adjust.

“There is not as much culture shock coming here as there would be going to another country,” Canadian graduate student Xenia Young, PhD ’91 said.

“The differences are much more subtle. For example, I’ve noticed that Americans don’t know how to cut food properly. They use forks like daggers,” she said.

One difference that all Canadians notice is the value of the dollar. Tuition and the cost of living are thirty percent higher for Canadian students than for American students. For example, tuition in the College of Agriculture and Life Sciences is approximately $8,000 (Canadian), taking into account the exchange rate and the out-of-state tuition cost. For an American out-of-state student, tuition is slightly less than $7,000. “The money withers away quickly, which is quite a shock,” Young said.

Politically, Canadians are a lot more peace-loving. “If one compares the approach of a generic Canadian compared to an apathetic American to government authority, the American is more likely to question that authority,” Canadian Club President David Featherston, PhD ’89 said. “Canadians are much more traditional. They feel that the laws of the land are there to protect them from harm, rather than to harm them,” Featherston added.

The Canadian government plays a role in trying to differentiate Canada from the United States. It has created an idea called the Canadian cultural mosaic which parallels the U.S.’s melting pot in an attempt to mix cultures. “Many people do not realize that Canada has just as many nationalities as the U.S. and this is the government’s way to advertise this,” Featherston said.

One complaint many Canadians have is America’s general ignorance towards its northern neighbor. “I’ve had countless numbers of people ask me if it always snows in Canada,” Keith Donovan ’89 said. “I ask them if it’s always sunny in New York. Once I was listening to a New York Yankee baseball game played in Toronto, and the New York announcers didn’t know the name of Lake Ontario. That’s ridiculous; I know where Lake Placid is,” Donovan said.

One thing that amazes Donovan is the school spirit at American universities. “At home, people just go to school and after class, lead their own lives. Here, the school you attend is your life. I sleep, eat and drink Cornell,” Donovan said.

Despite the subtle differences between the two nations, most of the Canadian students feel right at home in the States. In fact, it is the Americans that look at them in a sort of awe that they are foreign. “I think if anything, the real differences are between the east coast of North America and the west coast, rather than between the two nations,” Featherston said. “Toronto is certainly a lot more similar to Buffalo, New York than it is to Edmonton, Alberta,” he said.

“Everyone always wants to know what it’s like over there,” Chris Grenier ’89 added. “I hate to disappoint people, but we are basically the same as anyone else,” he said.

by Izabella Rudzki ’89
THE POWER OF DISCOVERY

Everyone has their reasons for going to the New York State Fair. Some go for the never-ending food stands. Others make the trip to Syracuse for the rides and games. Each year the Grandstand is packed with screaming fans waiting to see their favorite musicians in concert. And there are some people who go to the Fair to see Cornell.

The New York State College of Agriculture and Life Sciences has participated in the Fair for the past four years, and 1987 was no exception. The College had the largest single-topic exhibit at the Fair, "The Power of Discovery," which covered 10,000 square feet in the Agriculture and Health Building.

This year 837,000 people went through the turnstiles from August 28 to September 7—the highest attendance in the Fair's 142-year history. Fair officials estimate that 80 percent of the fairgoers will go through any one exhibit, meaning almost 670,000 people saw the Cornell exhibit.

Kenneth E. Wing BS '58, MEd '60, PhD '66, Associate Dean of the College, said that the exhibit's main goal was to promote New York state agriculture. "We want to educate people about the number one industry in the state, and we show them Cornell's contribution to the agricultural industry," Fair Director Joseph E. O'Hara said, "The Cornell exhibit is educational and entertaining."

Planning for the elaborate display begins one year in advance. Cornell's Media Services plays a major role in creating and designing the exhibit. James A. Mason, the assistant director of Media Services, was co-coordinator of the exhibit with the department's visual communications manager, George Lavris. "Each year the planning goes better and better," Mason said. "Les Baldwin, Carlton Ryan, Roy Lonnberg, and Pat Moore of our exhibit staff know what we're dealing with." Every division of Media Services, from the design and photo studio to the exhibit shop, is involved with the State Fair project.

"The challenge is to get the people involved in the display," Mason said. "The more senses we can involve, the better." Media Services added phones with an electronic digital voice system to explain the biotechnology exhibit. "Cornell is the first university in the country to use this technology," Mason said. "Its service life is indefinite because there are no moving parts to wear out."

Preliminary construction of the display occurs at the exhibit shop at Research Park. Glue, screws, nails, plywood, and Plexiglas are among the materials and supplies used. Gatorboard is a prevalent component of the display. It is a wood-pulp substance made into a veneer with a foam core.

The exhibit is transported to the fairgrounds in everything from rental trucks to station wagons. It takes about two weeks to set up, and a crew from the fair works with the Cornell staff.

The New York State Agricultural Experiment Station at Geneva also helps design and create the exhibit. Plants for the indoor vegetable garden are grown in Geneva. For the last two years, the Geneva staff has given fairgoers a total of 100,000 packets of Marketmore cucumber seeds, developed at Cornell.

Dean Wing said that staffing is an important element of the display. "The warmth of people can be a positive attraction." The Geneva Experiment Station had almost 40 volunteers work at the 11-day event. Media Services sent 26 people to work at the display, and about 20 people went from the College Admissions Office, including 11 students.

The display costs an average of $50,000 a year, according to Dean Wing. "The money does not come from student tuition or state sources," he said. "The exhibit is paid for through the Dean's Fund, which includes donations from alumni and corporations and indirect cost recovery from external contracts and grants."

Donations also decrease the actual cost of the display. Some of the structural materials and all of the seed packets were donated. Bausch & Lomb donated the use of a $2,500 microscope.

Donald G. Butcher, New York State Commissioner of Agriculture and Markets, considers the Cornell display a success. "I was once again very impressed with the exhibit's quality and its creative nature," he said. Dean Wing said he appreciates the compliments he has received, but he added, "The lack of negative comments is even higher praise."

Plans are already underway for next year. Media Services will be challenged to create the blueprints for a new exhibit featuring the New York state dairy industry. Dean Wing said he looks for it to be "the best exhibit ever." That's as good a reason as any to put the 1988 New York State Fair on your calendar.

by Sharon L. Detzer '88
Learning for fun

by Nina Fastenberg '88

Have you ever heard of a college that doesn't give homework or exams? If not, then you don't know about Cornell's Experimental College, a series of short, non-credit courses sponsored by the Campus Activity Center. Entering its sixteenth year on campus, the "ex-college" is Ithaca's largest program of leisure courses. The curriculum takes on a variety of forms and covers a wide gamut of interests.

Ranging from "Oil Painting" and "Cartooning for Fun" to "International Vegetarian Cooking" and "Public Speaking," the classes generally span eight weeks, meeting one evening per week. There is some variation, however, in the structure of the classes. Several unique courses take the form of an intensive one-day seminar, while others meet twice during a semester. Typically, courses are offered in the areas of art, mind/body awareness, culinary arts, music, dance and special interests. The special interest courses cater to a more esoteric group of students who wish to explore outlandish fields such as chess, personal finance, shorthand, massage, sign language or auto mechanics.

While the majority of the Experimental College's participants are Cornell students, the program is open to faculty members as well as the entire Ithaca community. According to Beth Farnsworth, coordinator of the Experimental College, the program provides an outlet for students and others, which they might otherwise not have, to explore an interest. "The participants are a curious bunch who want to learn practical skills without the burden of an unreasonable tuition or pressure from grades," remarked Farnsworth.

And in fact, a large number of requests about course information indicates that the program is indeed a success. "I expect this trend to continue, especially if we can better reach the public conscience," noted Farnsworth. Those who have taken a course at the ex-college attest to the program's worth. "It was a good chance to do something non-academic, relaxing and enjoyable," said Julie Altman '88, who completed a course in drawing last spring. In accord, Chris Pisciotta '88 added that "I found the Experimental College to be worthwhile because these fun and entertaining courses are not offered by Cornell."

Despite the ex-college's growing popularity, Farnsworth pointed out that the "leisure-learning phenomenon," has not been stable over the years. In fact, the zig-zag pattern [in registration] indicates that interest varies with social change. Before the drinking age was raised to twenty-one in 1985, enrollment in the bartending course had reached an unprecedented number. "Many students took advantage of the opportunity to drink and to gain a useful skill," said Farnsworth. Nevertheless, when the under-21-year old age group lost its right to legally purchase alcohol, Cornell's Campus Activities Center lost its liquor license. As a result, the college's enrollment has tailed off a bit over the past few years.

Since its inception in 1972, the Experimental College has changed dramatically. Presently, the program has quadrupled its number of courses, reaching a "record-breaking" forty-eight. As a result, enrollment has soared with the number of courses. The college became especially popular in the 1970s, because of the attitudes of self-growth and self-realization, characteristic of that decade. Additionally, the advent of the ever-popular bartending course caused enrollment to reach a plateau. Over the years, the program has not only expanded its number of courses, but the variety as well.

Cornell is not alone in its endeavor to offer leisure courses to its students. In fact, the Experimental College is a common program offered by universities and colleges throughout the United States. According to Farnsworth, approximately 60 to 75 percent of all colleges offer such a curriculum in one form or another. The University of Wisconsin has had a "remarkably ambitious" program, serving its enormous student population with roughly 200 mini-courses.

Farnsworth, who has coordinated the Experimental College for the past three terms, is leaving Cornell to pursue other interests abroad. Although she is sad to leave, she is certain that the program will experience continued success under the leadership of Maribel Santiago, an intern from Ithaca College.
Two women take turns speaking at the podium, one white, one black. Occasionally their voices lift and sashay in a genuine North Carolina accent. Victoria Byerly and Reverend Katie Cannon read selections from a book on which they have recently collaborated, *Hard Times Cotton Mill Girls: Personal Histories of Womanhood and Poverty in the South*. Published by the Industrial and Labor Relations Press in 1987, the book is a collection of the oral histories of twenty women, both black and white, who have worked in a textile mill in a small town in North Carolina, often for two or three generations.

All the women interviewed were either relatives of the two women or the friends of their relatives. The Reverend Dr. Katie Cannon, the first black woman to ever have been ordained as a Presbyterian minister, was able to persuade many black women in the community to give Byerly very candid interviews. As it happens in the academic community, often a subject of interest located in one school of the University parallels or supplements research on a similar topic in another school. In this case, the resources of several varied departments converge. The reading itself was sponsored by, among others, the Africana Studies and Research Center, the Department of Women’s Studies, the Society for the Humanities and the Department of Rural Sociology.

For example, Professor Tom Lyson of the Department of Rural Sociology in the College of Agriculture and Life Sciences believes that “historical documents in, say, the Catherwood Library of the School of Industrial and Labor Relations, give us an extremely useful perspective on some of the research I am doing today in my department,” as does the research compiled by Byerly. For example, Professor Lyson has been studying the lives and working conditions of rural mill workers in various parts of the South in the past two decades.

“Mill workers are a lot different from turn-of-the-century garment workers. Most garment workers were immigrant men, women and children originally from central Europe,” said Professor Lyson. “But mill workers in the South were all white and native-born until black workers were finally allowed to work around the 1940s.

“However, modern mill workers often have to bear with many of the same long hours and low-paying working conditions that mill workers endured in New England in the late 19th century,” said Lyson. Problems with unbearably loud working conditions and disease resulting from insufficient ventilation, light, and dust control are hazards that time and technology have not necessarily improved, according to Lyson.

It was very popular for young women to work in mill factories in the 1800s, Lyson said. Documents in the Catherwood Library show that they lived regimented and well-supervised lives in towns clustered about the mill, often rooming in dorms provided by the mills.

“Strangely enough, before the outbreak of World War II, I found that these Southern mill workers also lived very regimented lives, with bells sounding to wake whole families for work. Mill-working families lived in houses and bought food and clothes from stores all owned by their employers,” said Lyson. “In fact, even the architecture of some high-sloped New England factory buildings, designed to let the snow slide off in the winter, was exactly the same in modern mill towns in Georgia.”

Professor Lyson’s research has convinced him that “while you can create a lot of jobs, especially ones like low-skilled and low-wage-earning ones, you don’t necessarily create a better quality of life.” Armed with facts and figures, words, pictures and diverse resources, Professor Lyson, Victoria Byerly and the Reverend Katie Cannon will be able to show exactly that.

A woman at the loom in a New England mill. Circa 1858.
A student rushes into class, plops down in the first available seat, rummages through his knapsack in search of paper and pen, and reads himself for another dose of professorial wisdom. He looks around and appraises the people in neighboring seats and wonders what would ensue if he were to initiate discussion with the attractive young woman three rows behind him or the broad-shouldered bully taking up the two seats to his right.

He considers talking to the attractive red-headed woman next to him, apparently the course's teaching assistant. As the conversation progresses, he discovers that she is not only the teaching assistant, but also an undergraduate. The woman is Sandra Felthousen.

Felthousen, a communication student, is not like most of the other 3,104 undergraduates currently studying in the College of Agriculture and Life Sciences. In addition to acting as a teaching assistant for photo communication and working on a new student-run advertising and public relations firm at Cornell, Felthousen is helping her husband raise their two children.

Born and raised in Guilderland, New York, Felthousen earned her nursing degree in the early 1970s. Three years ago she reached a point in her life where she "wanted something more." She had played the roles of wife and mother, involved community member and licensed nurse. Armed with her nursing degree, Felthousen headed for school in the hope of earning a degree that would enable her to work in hospital administration, particularly in the areas of marketing and strategy development.

Since attending school, however, her goals have changed. "I am constantly looking in new directions," Felthousen said. "I think my vantage point of being an 'adult student' allows me greater perspective in analyzing where I have been and in determining where I want to go."

Accepting a challenge keeps Felthousen ahead of the game. As an adult undergraduate, she has faced many obstacles in the Cornell environment. "When I first came back to school it was very difficult," she said. "As an adult, professors don't know how to relate to you as a student and students don't know how to relate to you as a peer. My first few months were very difficult because I had to take such an active role in overcoming these barriers."

Sandy Felthousen '88, a communications major, at her Horseheads, N.Y. home with her family.

Having made dean's list six consecutive semesters, one might think that school and grades are the only things on Felthousen's mind. "I have a loving and supportive family and they are a big part of my life," she said in response to such misconceptions. "My husband and I have tried to maintain a balance at home, especially with the girls," she added. "I think we've all benefitted from my school experience."

Kristy 12, and Laurel 10, both watch their mother go off to school each day. "It's not really any different than our friends' mothers going off to work," Kristy said. Laurel added, "When mom has homework to do, we usually go outside or to a friend's house to keep out of her way."

Prior to the start of the school year, Felthousen sat down with her two daughters and explained that she would be gearing up for school again and that they would again be responsible for themselves while she was in Ithaca. The girls giggled and exclaimed, "We can't hear you mom because your school-bells are ringing in our ears!"

Felthousen's husband, Bill, feels that her experience as a student is helping to instill good study habits in their daughters. "They see Sandy studying—then they decide to hit the books," he said.

"My wish," Felthousen said, is that everyone should have the opportunity to do what I have done. I am not the same person I was before all this—and that is good. I've reached a goal ahead of deadline. It has been fulfilling and rewarding to challenge the untested [talents] within oneself."

Felthousen claimed that in the beginning of her second college career, she had doubts about the endeavor. She asked herself if it made sense to pursue a second degree, if she was really interested in the goal she had set for herself and if it benefitted her life and the lives of her husband and daughters.

Time travelling from family life to the world of academia, Felthousen reflected on her studies. "Evolution and revelation are probably the two best words to describe what has happened to me in the last three years."
Which courses at Cornell University enable its students to challenge themselves, develop new friendships and gain confidence through informal teaching sessions and active participation? The Outdoor Program's wide range of wilderness exploration classes offer just such rewards.

As a division of the University's Department of Physical Education and run by Director Dan Tillemans and Associate Director Alexandra Gayek '79, the Program conducts backpacking, bicycling, climbing, natural history, outdoor leadership, paddling and skiing instruction to students, staff and the public year-round. "About 750 students enroll in our courses each year and one-half of these students sign up out of pure interest," said Tillemans.

Students reap many benefits from taking advantage of the course offerings. "The goal of each course differs," Tillemans said. "Rockclimbing, for example, is more of a challenging activity while backpacking is oriented more towards having students commune with nature and having time for personal reflection," he said.

All courses, however, are designed to encourage and provide support for its participants. Also, the small class size (most courses have a maximum enrollment of 12 students and are led by two instructors) facilitates students' hands-on involvement and encourages active participation and control in the decision-making process of each class, said Tillemans. "My group in the leadership skills course that I took became really close and we were extremely supportive of one another. Because of that, I was able to develop both group and personal leadership skills," said Shana Langer '88, who took a backpacking and a skills development course through the program.

Another unique quality of the Pro-

Above: Ice climbing on a frozen waterfall. Opposite, clockwise from bottom left: canoeing expeditions; cross-country skiing; blindfolded rock climbing.
gram is that about two-thirds of the instructors are undergraduate or graduate students. The instructors typically have years of experience in the sport they teach and most have taken courses through the Program themselves. "I learned about the Program when I took Outdoor Leadership last spring," said Jeff Elam '88, an instructor for the Ecology of Bicycling. "Now that I am teaching a course, I am able to share my knowledge with others and that is really satisfying," he said.

Instructors are selected through a month-long process each November and April. Once selected, they attend a series of training seminars which reinforce safety techniques for each activity as well as strengthen outdoor leadership skills. "Much of the training taught me how to facilitate ways of learning and enabled me to effectively communicate my ideas about group cooperation and environmental concerns," said Kathy Rankin '85, an instructor for two courses, Whitewater Kayaking and Canoe Expeditions.

The Program's offerings also extend beyond the physical education department. Tillemans and Gayek are currently working with professors in the education department to develop independent studies for student instructors interested in learning how to teach and develop leadership. The Program is working with the Department of Natural Resources and the Plantations in preparation of the annual meeting for visiting trustees and council members in October. The Outdoor Program is also actively involved in plans to develop an outdoor education center at Beebe Lake. And, it runs an equipment rental facility out of Barton Hall. In the future, Tillemans hopes to further expand the Program to aid other University functions. "We would like to be able to provide support services to some of the academic programs at Cornell," he said. He feels that the Program has the "expertise and equipment" needed to conduct outdoor trips that can reinforce classroom instruction. There are also possible plans to develop trips specifically for alumni.

Such plans would provide even more individuals with the unique personal rewards which students and instructors unanimously agree is the best part about the Program's course offerings. "Taking Whitewater Kayaking has given me one of the most fulfilling and different experiences I have had thus far in my Cornell career," said Peter Michel '89. Shana Langer '88 agrees. Ken Gerow Grad, an instructor for Adirondack Ski Expedition, summarized the spirit of the program when he said, "There is nothing in the world like sharing ideas and attitudes about the environment and working with others to finally obtain that thrill of reaching the top of an Adirondack Mountain on a bright sunny day."
Where the Judges Are Judged

One of Cornell’s most competitive teams may also be one of its best kept secrets. “The Cornell dairy cattle judging team has the best cumulative record of any university in the United States,” said Dr. George Trimberger, professor emeritus in the Department of Animal Science. Those involved in dairy science across the nation widely recognize the Cornell judging team’s accomplishments, but there are many in the Cornell community who have not heard about the team or its impressive record.

The four-member team travels to contests at which they individually inspect and rank cows from best to worst. Each member then gives the official judges oral reasons for their selections. Students judge type traits such as dairy character, udder attachments, feet and legs, according to Kirsten Fowles ’88, a member of the 1986 Cornell judging team. “The scariest part is giving reasons,” said Fowles. “You go into a room where the official judge is and give reasons off the top of your head—no notes!” After seeing 48 cows in less than three hours Fowles said it is difficult to remember which cow places where, and why. “After learning to give reasons, you can stand up and speak in front of anyone,” said Fowles.

Making the team is difficult. All candidates and others interested in dairy science take Dairy Cattle Selection, a course offered in the spring by Prof. David Galton, the coach of the judging team. “There is an educational value to judging because it teaches one to think in a logical manner and express oneself,” said Galton. “This is experience needed in any field.”

Galton said there are trips scheduled to New York state farms during the class where students practice judging. Points are tallied in order to select the top six candidates. “The top six students go on a nine day tour across the state in August to judge cattle of five different breeds,” said Galton. “In the end the final four are chosen.”

There are three competitions that the team attends—the Eastern States in Springfield, Massachusetts, the Pennsylvania All-American in Harrisburg, and the Intercollegiate National Contest held in Madison, Wisconsin.

The 1987 team placed first judging at the National competition held on September 30 by the largest margin ever. Tony LaPierre ’88 placed second, Steven Morrill ’88 placed fourth, Matthew Budine ’88 placed fifth and Terry Dechow ’88 placed eleventh. In reasons, the team scored second. Budine placed the highest individual in this contest.

Galton said the ten day trip to Madison included visits to artificial insemination bull stud centers, universities, and farms in New York state, Ohio, Indiana and Wisconsin. These visits gave the team practice before the championship.

Earlier, the team placed first at the Eastern States competition and third at the All-American contest.

This is not the first year that the Cornell judging team has placed well. The program, which started in the 1900s, competed intermittently until World War I, according to Trimberger. Trimberger took over the coaching in 1947 and there has been a team every year since. He coached 24 teams, seven of which won National championships. The team is currently supported by a fund that carries Trimberger’s name—the Harrison, Trimberger and Slack Fund—which supplies the money allowing the team to compete.

Trimberger said he likes to stay aware of the team’s competitions. “The advantage rests with youth,” he said, “and I am pleased that Dave Galton is here to carry on the program.”

Cornell has a long history of success in dairy cattle judging, and this success is expected to continue. When asked what is required for an excellent judging team, Trimberger replied, “Good cows and good people—and New York State has the best of both.”
The student ambassadors for Cornell University’s College of Agriculture and Life Sciences are a strong link in the chain that unifies the college’s past, present, and future. Activities such as an annual open house, transfer day, and alumni socials allow current ambassadors to interact with both the history and the future of the ag college.

Ambassador coordinators are keeping this year’s membership down from other years, according to ambassador advisor Susan Miller. Miller said that this change reflects a “desire to encourage more active participation on the part of each ambassador. Miller explains, “The organization will become a more personal experience with fewer ambassadors.”

Ambassadors meet students interested in the College through several recruiting functions. The largest such function is the annual open house. The Ag Ambassadors join the ambassadors from Cornell’s other statutory colleges (Human Ecology and Industrial and Labor Relations) in hosting prospective students on campus for a day. Ambassadors talk to the visitors on an informal basis about Cornell and the ag college. They discuss programs of study, student activities, and life at Cornell. The ambassadors are a welcome source of information for the visiting recruits, according to Miller.

Another big recruiting event sponsored by the Ag Ambassadors is Transfer Day. Transfer Day is, like Open House, co-sponsored by ambassadors from all of Cornell’s statutory colleges. It is a way for the ambassadors to reach students who are considering Cornell as a transfer option. Ambassadors compare college experiences, courses, and special activities with their guests. The Ag Ambassadors can learn about other colleges and universities this way.

Ambassadors are invited to join the College alumni for dinners, picnics, and parties. The students meet some of the College’s most prominent alumni. Ambassadors update alumni on the organization’s activities and changes in the ag college, while alumni share their experiences beyond the ag quad.

The organization is starting a new program this fall, which involves having each of the ambassadors invite a favorite high school teacher to visit Cornell for a day. While on campus, the teacher will attend classes with their former students and see first-hand how the transition is made from high school to an Ivy League university. The reasoning behind this program, according to Miller, is to incorporate teachers in the recruiting process. “Teachers are the ones that have the most access to good students,” Miller said. Most college recruiting efforts are directed toward guidance counselors, but it is the teachers who really get the most exposure to students. “Teachers should be involved in the decision-making process,” Miller said.

Miller said that this program will be of particular interest to science teachers who get the chance to participate. “They will get the chance to visit Cornell’s laboratories—to see first hand what is happening on the forefront of their field,” she said.

Miller, for whom this will be the third year with the ALS Ambassadors, is very excited about the new program, as well as the continuing activities. Her enthusiasm for the organization is matched only by the energy she puts into ambassador events. It is this kind of enthusiasm that has kept Cornell’s largest ambassador program, which is even larger than the University Ambassadors, linking the College of Agriculture’s past, present, and future. The work done by this student organization has led many to refer to it as “the heartbeat of ALS.”
To many, food additives are no more than funny-sounding words listed on the side of a box of favorite cereal. To Cornell University nutritionist Christina Stark and food scientist Joseph Hotchkiss, however, these substances can play an important role in the diet of the American consumer. Most of us, in fact, would have trouble eating a meal that did not include some kind of substance intentionally added by food processors to maintain freshness, improve nutritional value, ease processing or simply make food more appealing. Today, there are over 2,800 different types of food additives—two of which have recently appeared in the limelight of the scientific and public arenas.

**NITRITE**

Nitrite, a preservative used in the curing of meats, poultry and fish, first captured the interest of scientists and consumers alike over fifteen years ago. Prompted by the recommendations of an expert panel which reviewed the meat-curing process in the mid 1970s, the United States Department of Agriculture (USDA) reduced the level of nitrite permitted in bacon and required the addition of ascorbate (vitamin C), a chemical that inhibits nitrosamine formation from nitrite. (Nitrosamines are chemicals which can cause cancer when given to laboratory animals.)

For the most part, the American public learned about the hazards of nitrite from the "stay clear of bacon and bologna" cry made by some nutritionists and consumer groups at the time. Anxious to warn the consumer about the panel's findings that nitrosamines can result from the use of nitrite, health officials strongly suggested that Americans decrease their intake of meat cured with this preservative. In the past few years, however, the boiling commo-

Where's the artificial sweetener? The products above are only a few examples of foods that contain aspartame.

tion over nitrite has simmered down dramatically.

According to Joseph Hotchkiss, an associate professor in the College of Agriculture and Life Sciences, this change in attitude has been brought about in part by the considerable amount of nitrite research conducted in the 1970s and early 1980s. "Researchers analyzed virtually every substance in the western hemisphere and came up with some very interesting information," Hotchkiss said.

The investigators discovered that the greatest exposure to nitrosamines comes not from eating cured meat but instead from smoking cigarettes. Beer, cosmetics, baby-bottle nipples and automobile interiors also contain relatively high levels of these carcinogenic nitroso-compounds. Fortunately, these findings have caused manufacturers—especially those in the bacon, beer and rubber industries—to re-evaluate their processing techniques and eliminate the use of the preservative wherever possible in order to reduce exposure to nitrosamines.

The increased care that food processors have taken to reduce nitrite levels as a result of scientific research is only one factor responsible for allaying much of the public concern over this preservative. The change in emphasis made by food scientists in their investigations has also resulted in a more relaxed attitude about nitrite. According to Hotchkiss, many researchers are examining the natural formation of nitrates within the body rather than direct environmental exposure to the substance. "Today, many toxicologists in the scientific community believe that such minute amounts of toxic substances have nothing to do with human disease," Hotchkiss said.

How, then, should the modern consumer feel about the use of nitrite as a food additive? Hotchkiss suggests that the public need not avoid the preserva-
Aspartame consumption, but I believe that anyone who thinks he or she is sensitive to aspartame should avoid it. Remember, it's not an essential nutrient!"

Stark advises consumers to be careful label readers—"You may be surprised by the kind of foods that have aspartame listed as an ingredient. High-fiber breakfast cereals are an example." Because aspartame breaks down chemically and loses its sweetness when exposed to cooking or baking temperatures, food manufacturers add the substance only to foods that require no prolonged heating during preparation.

In the past few years, some scientists have expressed concern over aspartame's use in so many foods eaten by children. "This worry may be legitimate," Stark said. "The FDA's Acceptable Daily Intake (ADI) level for NutraSweet®—a daily consumption rate that would be considered safe if maintained throughout your lifetime—is based on body weight and translates into 17 cans of diet soda for the average 150-pound adult. For the 40-pound child, this number is reduced to four or five cans. Now, if soda is the only source of aspartame in the child's diet, consumption levels may be reasonable. The concern begins, however, when, besides a few cans of soda, the child also has a chewable vitamin, a bowl of cereal and a cup of cocoa—all possible sources of the artificial sweetener."

Some public officials are trying to respond to critics' cries that NutraSweet® demands additional attention. Senator Howard Metzenbaum, D-Ohio, not only wants more testing done on the sweetener's safety, but also thinks manufacturers should put warning labels on all aspartame-sweetened products. In addition, he would like to give consumers an idea about the amount of Nutrasweet® that they're eating, compared to the ADI.

Metzenbaum has scheduled a congressional hearing on NutraSweet® for the fall of this year. What should the consumer do while the issue of aspartame's safety is being resolved? According to Stark, the first step is for people to become aware of the sources of aspartame in their diets. Moderate amounts of aspartame appear to be safe for most people; excessive amounts should probably be avoided. As more and more aspartame-containing products appear on the market, label-reading becomes more important.

As far as additives are concerned, both Stark and Hotchkiss agree that a diet consisting of a wide variety of foods decreases the possible risks which these chemicals may—or may not—present. The scientists also believe that it is important to moderate the amounts and types of foods that are eaten. Translation: stay in touch with what goes into the food on the supermarket shelves, as well as what goes into your shopping cart, and you'll probably lead a healthier life!
A Glimpse of Collegetown's Past

Every four years, its population is renewed. Seniors bid what may be their last goodbyes to the hodgepodge of restaurants, bars, and bookstores known as Collegetown. A few months later, freshmen prowl the streets of "C-Town" in search of food and drink and later, apartments. Yet in four years they too will be gone. But they will have left their mark on Collegetown, the area of Ithaca where "town meets gown," as surely as generations upon generations of previous Cornellians have.

About the only thing Cornellians can count on when returning to Collegetown years after graduation is that it will bear very little resemblance to the place they once knew. Businesses and buildings, personalities and happenings come and go, like students on a Friday night. Few students at Cornell today have heard of such places as the Uni-Deli, the People's Park or Morrie's, but look at someone who graduated 5 years ago standing outside of Johnny's and wondering how it came to be a Mexican restaurant. You will know that these places were as seemingly real and permanent as Dionysus and Oliver's are today.

1950s it became a haven for beatniks and bohemians. Literary figures that are today famous once went to Johnny's for dinner and drinks. Richard Farina, author of Been Down So Long it Looks Like Up to Me, and Kirk Sale were suspended for protesting a University policy banning apartment parties. Thomas Pynchon lived on Buffalo St. while Vladimir Nabokov, author of Lolita lived on Seneca St. Harry Chapin sang and washed tables at Johnny's Big Red Grill. In the 1960s the concentration of literati dwindled, but Collegetown was the center of a number of lively protests. Police once bombed a crowd with tear gas, and a small plot of land on Dryden Rd. became known as the People's Park.

No doubt, this year's freshmen will have their own experiences and stories to tell about Collegetown. Yet the place they know will change again, as it has for the last century.
Ever since I was young, I have been an adventurous soul, but even I balk at the idea of crossing the Cornell campus. When it comes to that, I would rather stay in my Collegetown apartment and watch a bad “B” movie. You may scoff at my seeming over-reaction, but with the recent construction boom, traversing Cornell’s beautiful campus has become a long and hazardous journey.

Even before the construction boom, there were hundreds of dangers around campus. Vicious dogs, people-eating cars and big frat dudes selling pink flowers are just a few of these dangers.

Now, with all the construction taking place, there’s nowhere to run. You may think I exaggerate somewhat, but let’s look at a typical weekday and see what happens. I’ll use Wednesday as an example. My first class is at 9:05 in Warren Hall. I get up about 6:30 in the morning and I’m usually out of the house by 7:15.

If the construction on the College Ave. bridge were done, I could take a bus, but with the bridge gone, I’m never really sure where the buses are.

I live on Dryden Road, so I walk to College Avenue and cross the footbridge. Well, actually I try to cross the College Avenue bridge, just for old time’s sake, but the construction workers chase me away with shovels.

Once on the footbridge, I have to push through the throngs of other students to the first road I must cross. If the College Avenue bridge were fixed, there wouldn’t be so many people here. However, if there weren’t so many people, it would be much harder to cross the road. The way it is now, I just let the crowd sweep me across the street (cars won’t mess with large groups of pedestrians). Then I can dash across East Avenue.

This sidewalk is less crowded because of the Statler construction. I guess most people just don’t like to dodge angry workmen and falling bricks. I just run really fast and duck my head. It works for me.

I reach the corner of East and Tower roads out of breath but unhurt (if I have lost you, I am next to Uris Hall). I don’t cross the road yet because there are about 10,000 people on the other side waiting to trample me. There aren’t as many people on my side of the road because the sidewalk gets very narrow and it’s a lot easier to be pushed into the road.

I turn down Tower Road, knowing that this is where—due to spots of minor construction on the other side of the road—bikers and joggers become numerous, and therefore, dangerous. If one is quick-witted and alert, there is no real danger. Unfortunately, I’m not much of either, so I usually wind up on my back with tire prints on my chest and footprints on my face.

The next intersection is probably the most dangerous part of the whole trip because there are so many cars and people in one small place. The intersection is made even more dangerous by the construction in front of Malott Hall. Due to a great deal of practice, however, I have become almost invincible at crossing this intersection.

The first step is to cross diagonally; it always confuses everyone. I run out about ten feet and then stop. Cars coming through the intersection swerve at me. Any driver stopped for the red light (a rarity) starts after me. Then all I have to do is run back to the corner and watch the fun. After the accidents tie up traffic, I can safely cross the road.

Once on the other side of the intersection, I must make up my mind about which way to go to Warren. I can go around the front of all the construction by Roberts Hall or behind it. There are less people the back way, but there are more construction workers who throw bricks and stuff at me. Today I am in no mood to be trampled, so I go the back way, ducking my head as I run.

I get to Warren about 9:00, battered and weary. It’s been a long, hard journey, and I still have to get back home. Nothing ever comes easy, does it?
Our philosophy on unionization is for the employee to have as much information as they can so they can make an informed choice. The union is going to represent one side—the pluses of the whole thing. The University philosophy has been to present the other side of the story. That is obviously construed by the union as 'union-busting.' That philosophy is what Manager of University Employee Relations Peter Tufford uses to conduct his business. The business of negotiations and communication between Cornell unions and its administration is, from both sides, an exhausting one.

Slightly less than 17 percent of Cornell's non-faculty employees are members of one of the five different unions on campus. The groups range from one member in the United Food and Commercial Workers in the College of Agriculture and Life Sciences to the local chapter of the United Auto Workers, which represents about 900 service and maintenance employees.

The other unions are the local 36-member International Union of Operating Engineers, the independent 55-member Cornell Security Employees Union, and the 125-member Building Trades Council which represents seven different trades on campus.

"The unions are here and we're going to have to live with them," said Tufford, who holds the uncelebrated task of dealing on behalf of the administration with the union's bargaining units during negotiation periods. He also deals in the everyday administration of the five contracts. "I know there are times when it's a pain in the neck for everyone involved." Tufford did not recount every bargaining session with the unions, but he said such memoirs could fill a book.

What would fill the pages of such memoirs if the Cornell administration were to pen some chapters? Tufford said a sense of frustration would have to be included in such an imaginary book. He said, "There's enough bureaucracy and red tape involved in business that you don't need another level thrown in there." To the business-sense of the University's administration, unions are that other level.

The upper levels of Cornell management are mainly concerned with economics—profit and loss—when it comes to bargaining for wages and benefits, Tufford said. The union is going to try to get the most for its employees, and the University has to deal with those demands as it sees fit. "The parameters would be set in keeping with the wants and needs of the individual departments," Tufford said.

Sometimes those wants and needs of the University collide with the wants and needs of employees as expressed by the union. Tufford continued to outline the table of contents of the imaginary book of memoirs and came up with a few examples:

—Four years ago Cornell laid off the only two members of the United Food and Commercial Workers union after the ag college closed its meat shop. Tufford said a grievance was filed, and one employee was reinstated.

—in 1980 an 11-day strike hit the University during first-time contract negotiations with the then newly formed International Union of Operating Engineers. Tufford said the administration has since "been able to maintain a good relationship" with the utilities union.

—It took 23 negotiation sessions over a six-month period for the first contract to be agreed upon with the new Cornell Security Employees Union in early 1983. Tufford said, "Once the growing pains subsided, things calmed down and relations have improved over time."

Would the unwritten memoirs of Cornell's history with unions be complete if the only side to suffer a "pain in the neck" was the administration? No, said Al Davidoff '80, president of the United Auto Workers Local 2300.

"The University was bitterly opposed to having workers represented by the UAW," Davidoff said. He said it took a year for the union to win certification from the National Labor Relations Board as a Cornell union and described the campaign as "a struggle."

"But certain things have improved," Davidoff said. The University's general
acceptance of the union has grown since its certification in early 1981, he said. However, these improvements in relations have come because there is no choice on Cornell’s part, said the UAW leader. “The University is forced to work with the union; we’re not going away,” he said.

“We maintain very different views on certain issues,” Davidoff explained. That would account for the pain-in-the-neck chapter of the imaginary book. “The administration accepts the UAW,” he said, “but only if we’re willing to be quiet and unobtrusive. We’re not.”

Patrol officer Jim Morrissette agreed with Davidoff’s history and added his own. Morrissette is the president of the Cornell Security Employees Union, which represents about 55 Public Safety and Johnson Museum of Art security employees.

“It was a tough fight to get the union in place,” said Morrissette. However, he agreed with Tufford in that the whole relationship with Cornell has vastly improved with time since the independent union’s creation in December of 1982. “Both management and labor have matured,” he said.

Numerous unfair labor practice charges were filed in the union’s early days, Morrissette said. “The union labored under a fair amount of paranoia in those days,” he said. In recent years, though, no such charges have been filed.

In dealing with the administration, Morrissette said his union is treated differently. “The University likes to treat unions as a third party. They can’t do that with us; we’re completely autonomous and independent,” he said.

The Building Trades Council had a much easier time of it. Gordy Roberts, union steward for Local 241 of the International Brotherhood of Electrical Workers, said the union’s formation at Cornell in 1970 was a joint effort. He said that there was no need for an NLRB vote because both Cornell and the trade employees wanted BTC formed.

“There were rumblings of other unions coming to organize back then,” Roberts said. Cornell administration felt it was better to keep it all in-house, he said, and it has been a good working relationship since then.

Through 18 years of contracts with the University, Roberts said, “We’ve never struck. We’ve never had to strike.”

The chapter on conflict also exists.

The International Brotherhood of Electrical Workers Local 241 is part of the Cornell Building Trades Council. The BTC represents about 125 members who make up seven different trades at Cornell. Unlike some of the other unions on campus, the Trades Council has never been on strike.

Roberts said there are some everlasting problems. When it comes to contracts, Roberts said, “The union upholds their end of the agreement a little more often than the University does.” He said the administration has tried to misinterpret contract wording occasionally, but that it is usually not a serious problem.

The union is successful at negotiation more often than it is not, he also said. “We’ve managed to sway a member of the administration onto our side once in a while,” Roberts said. “Sometimes we’re definitely right and they’re definitely wrong.”

No such claim can be made about the unions and the administration in general, however. If anything, the universal fulcrum that union-management relations will balance on is that of compromise. One must give some to the other while maintaining its own benefits or profits.

Life under the unions is undeniably a better one, though, according to the three union representatives. Davidoff said, “There has been a tremendous change for the workers . . . a change in atmosphere of the workplace, a sense of camaraderie across campus.”

Patrol officer Morrissette would add to this chapter of the memoirs. “It’s been a real interesting and positive experience for all of us,” he said. “An education for all of us that we take a certain amount of pride in. And in the long run, it makes the workforce more productive.”

Roberts repeated, “We’ve never struck. We’ve never had to strike.”

And Manager Tufford, finishing up the imaginary book of memoirs, said simply, “What would’ve happened if the unions hadn’t been here? I really can’t say.”
**The ABCs of Ag Degrees**

by Andrea C. Fierro '89

When students graduate from Cornell University's College of Agriculture and Life Sciences, they can proudly hold their heads high and boast, "Yes, I made it through four years of the weather, the prelims, the hills and the Group C requirements."

Students in the ag college have academic requirements they must meet before they graduate. The requirements in the College are divided into four groups: physical sciences, Group A; biological sciences, Group B; social sciences and humanities, Group C, and written and oral expression, Group D. These groups represent 39 of the 120 credit hours students are required to complete in order to graduate. Fifty-five of the 120 credits must be in the College.

In the past, the social sciences and humanities distribution used to require nine hours of credit. However, this has been increased to twelve credit hours, six in each category, starting with the class of 1991.

Prof. Njoku Awa PhD '73 of the Department of Communication said that raising the distribution requirements was a collective decision recommended by the College Curriculum Committee, of which he was a member, and approved by the faculty. "We were of the opinion that students in the College were not getting enough from the University in the humanizing sciences or social sciences," he said.

He pointed out that in the physical and biological sciences, students are required to complete 18 credit hours. "Students were not receiving a well rounded education," Awa said.

But what about the natural science majors? Aren't they busy enough counting fruit flies and putting together molecular models? Do they really need the three extra hours of humanities?

Prof. Harry T. Stinson, Associate Director of the Division of Biological Sciences feels that the new requirement is "generally a good idea." He supports the increase in the "Group C" category and does not feel it will hamper most students' ability to fulfill their major requirements.

Awa feels that science students also need to develop an understanding of the humanizing sciences.

"Many people learn ideal patterns of social behavior from socialization experiences without understanding why the humanizing sciences explain behaviors, fertilize thought, instill moral values and broaden the mind," Awa commented.

"Students in this field [natural sciences] will be working with human beings, not plants and animals all the time," he added.

Olan D. Forker, professor of agricultural economics as well as Chairman of the department's Undergraduate Program Committee, also finds the increased requirements to be beneficial. "Social science and humanities requirements should be part of the curriculum of any college program," he said.

Forker feels the distribution requirements are one of the ag college's strengths. Speaking specifically about the area of applied economics and business management, he pointed out that students tend to focus on management type courses which he feels is a mistake. "To get a good understanding of economics and management students should also take such courses as psychology, sociology, government and history," he said.

Nina Attard '89, a biology student, feels that raising requirements will cause students like herself to exceed the number of endowed credits they are allowed in the College of Arts and Sciences. "After we've taken the physics, chemistry, biology and calculus courses, without adding in the humanities, we've come close to using up the 'arts' credits without having to pay extra money."

However, some students, like Brian Helmuth '89, an ecology and systematics student, find the humanities beneficial because they tie in with a student's major. Despite this, he has run into problems. "The problem is that my schedule is so rigid, I have a hard time fitting them [humanities] in my schedule.""}

Congratulations go to the class of 1991 and future classes to follow. As they make it through their years of higher obstacles at Cornell, may they look back on their higher education as well.

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Richard Polenberg teaches a popular history class that fulfills requirements.
Joint Effort in Research Center

Cornell University and the University of Vermont will jointly establish a Northeast Dairy Foods Research Center. One goal of the center is to step up research on dairy products to meet consumers’ changing needs. Another major goal is to increase the number of food scientists needed for the nation’s food manufacturing industry.

The National Dairy Promotion and Research Board, the dairy industry, and the two universities will finance the center’s research projects and other activities with approximately $1.8 million a year for five years.

Cornell food scientist David Baro was bano worked on the research center proposal. He said the work at the center will focus on the following areas: dairy product development; improvement of the quality and safety of milk and dairy products; dairy product processing and engineering; chemistry and microbiology of dairy products; nutritional attributes; development of standardized methods for analysis and testing of dairy foods and ingredients; and product packaging technology.

A significant portion of the research work is expected to be carried out in a new food processing and development laboratory now under construction at Cornell. The laboratory is a major addition to research facilities of the Department of Food Science.

Awards Update

Dr. Edward L. Bernays ’12 was inducted into the Academy of Distinguished Bostonians in May. The Academy honors individuals who have made outstanding contributions to the Greater Boston community, through leadership, community service, and innovative accomplishments. Bernays is considered the “father of public relations.”

William K. Doerler ’55 was elected President of the National Landscape Association in February. He is president of Doerler Landscapes, Inc. in Lawrenceville, New Jersey. At Cornell, Doerler was a member of Alpha Gamma Rho fraternity and Ho-Nun-De-Kah honorary fraternity.

Four members of the faculty in the College of Agriculture and Life Sciences have been named Liberty Hyde Bailey professors. The professorships honor distinguished faculty who have national and international reputations in agriculture and related sciences.

Dale E. Bauman, professor of animal science, has gained international recognition for his pioneering work in the use of bovine growth hormone.

Rosario Provvidenti, professor of plant pathology at the New York State Agricultural Experiment Station at Geneva, is an international authority on viral diseases of vegetables and their sources of resistance.

Daniel G. Sisler, professor of agricultural economics, focuses his research on assessment of technology and policies to boost food production in developing countries.

Peter L. Steponkus, professor of agronomy, is recognized internationally as an authority on the cellular and molecular aspects of plant freeze injury and cold acclimation.

David M. Galton, associate professor of dairy management in the agriculture college, received the 1987 Purina Mills Teaching Award in June. The award is given in recognition of outstanding teaching of undergraduate students in dairy science. In 1984, Galton initiated the Dairy Management Fellows Program designed for seniors interested in the integration of dairy farming and related industries.

John E. Kinsella received the 1987 Babcock-Hart Award in June from the Institute of Food Technologists for his research contributions in public health improvement. Kinsella, a specialist in lipid biochemistry, is the Liberty Hyde Bailey Professor of Food Chemistry and director of Cornell’s Institute of Food Science.

Frank Kosikowski MS ’41, PhD ’44, professor emeritus of food science in the College, received the 1987 Recognition Award from the National Cheese Institute. Kosikowski is known internationally for his expertise in cheese and cheese-making. He retired in 1986 after 46 years on the faculty.

Roger T. Trancik received the 1987 National Planning Award from the American Planning Association. He is an associate professor of landscape architecture and city and regional planning in the ag college. Trancik won the award because of his study which proposed revitalization strategies for 135 villages and hamlets in New York state’s Adirondack region. In 1984, he won a similar award from the American Society of Landscape Architects for the initial portion of the Adirondack study.

Richard A. Ledford, professor and chairman of Cornell’s Department of Food Science, received the 1987 American Cultured Dairy Products Institute Research Award. Ledford was cited for his contributions to the field of food fermentations.

Yong H. Kim was a winner in the Natural Food Institute’s first annual “Extra Hardy Plant Contest.” Kim received $100 for supplying detailed information on a worm-resistant potato, a long-keeping tomato, a disease-resistant alfalfa, and a high-yielding wheat.

COUNTRYMAN CAPSULES

How can certain moths fly at temperatures below freezing? How can Canada geese find their way back home each spring? How can kangaroo rats survive in the desert without ever drinking water? Why are some caterpillars hairy?

Answers to these and many other questions can be found in a new book, "The Naturalist’s Year: 24 Outdoor Explorations," by Scott Camazine, a Cornell University naturalist. Camazine is a visiting fellow doing research on honeybees in the Department of Entomology.

The book describes a series of investigations into nature. Some of the topics covered in the book include a warm-blooded plant of the swamps called skunk cabbage, migration of birds, honeybee swarms, how animals wage chemical warfare, and herbal medicine.
College students are notorious for their poor eating habits. For many of them, pizza, submarine sandwiches and soda comprise their three daily meals. After a month or two of such unbalanced eating, these students often feel fatigued and sickly. Most of them are not eating enough of the nutrients, vitamins and minerals that they need. This situation calls for a lesson or two in nutrition. What most people do not realize is that there is an organization at Cornell that fills just such a need.

The organization is SNE, the Society for Nutritional Education. Cornell's chapter of SNE is part of the SNE National Organization, which was founded in 1957 in the San Francisco Bay area. On a national level, SNE members include professional nutritionists and dieticians who, through SNE, are involved in developing legislation and federal policies regarding nutrition. At Cornell, the purpose of SNE is to promote nutrition education to both the Cornell and Ithaca communities. Through such activities as distribution of a biannual newsletter called NutriNews, as well as through Food and Nutrition days and other events, SNE promotes nutritional awareness.

Julie Baumler '87, a member of SNE, said that she thinks the organization definitely benefits the community. She said that she particularly enjoys Food and Nutrition days because she can use her knowledge as a nutrition major to teach other people. At last year's Nutrition Day, held at Willard Straight Hall, Baumler worked on a booth for nutrition-related cancer prevention. "I joined SNE because I thought it would be fun to get involved with the community aspect of nutrition. Also, it was a nice change from the scientific side of nutrition," Baumler said.

Although SNE is geared toward nutrition majors, anyone interested in issues such as local nutrition policy, nutrition education in schools or just general nutrition awareness can join. Susan Norton '88, an SNE member who plans on becoming a community dietician/nutritionist, said that she likes the idea of non-nutrition majors taking part in SNE because it boosts the feeling of community spirit.

Loran Salamone '88, vice-president of SNE, said that she thinks SNE needs to extend into the community even further in order to achieve its goals. Salamone said that she joined SNE as a sophomore because she felt she could play an active role in the organization, which, at that time, was very small. According to Salamone, interest in SNE is growing and SNE has become more organized. She said that SNE is planning a lecture series and also a Nutrition and Wellness Day, scheduled for next March. The thrust of the Nutrition and Wellness Day will be focused on exposing people to different types of diets and nutritional lifestyles, Salamone said.

Food is a vital part of life and SNE's aim is to make people more aware of nutrition in their lives. As Susan Norton '88 put it, "Everyone is an expert in nutrition because everyone eats. Some people just need to sharpen their knowledge."

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ABOUT THE ISSUE
Progress is the cornerstone of life at Cornell. In this issue, we'll examine the development of new Cornell programs and we will also look at some people that help further Cornell's commitment to advancement. You'll meet a new professor as well as an ambitious student ambassador. A new Asian American program is beginning as well as a pomology fruit plot. Tykes will soon be "sprouting" their knowledge about plants through a unique plant program. You'll even learn about a Bruce Springsteen concert in the making. Now, it's time for you to proceed with this evolutionary issue. We hope you enjoy it.
As he snaps the tab on a can of Diet Coke, Dave Kohl looks out over the students who settle into the seats of Warren 45. He smiles at the student in the first row as he adjusts his notes on the side of the table in front of him. They converse for a moment about Cornell’s amazing football season and then get back to their preparation for class. Kohl finally looks at his watch, raises his arms and says with a touch of Virginia in his voice, “All right—folks. Let’s get going. We’ve got a lot to cover today.”

David M. Kohl has been teaching at Cornell since late August when he transferred from Virginia Tech as a visiting professor in the Department of Agricultural Economics. After earning his masters and doctorate degrees in agricultural economics at Cornell, Kohl moved south and taught at Virginia Tech for ten years. While teaching at Cornell this fall, 1987, he is developing an entrepreneurial course that he will teach during the spring semester. Currently Kohl is teaching Agricultural Economics 220, Introduction to Business Management. This course, with a current enrollment of 819 students and normally taught by Professor Richard “Doc” Aplin, has been one of the most popular introductory business courses taught in the department for many years.

When asked how he felt about teaching a course with such a high reputation, Kohl said Aplin helped him establish the needs of Cornell students. Kohl has modified these needs to fit his style of teaching. Ten years ago when he finished his graduate work at Cornell and moved to Virginia, Dr. George Connerman, CALS Director of Instruction said, “You be Dave Kohl.” Since then Kohl has developed his own philosophies on education and has taken teaching techniques from those instructors he has respected and admired and incorporated them into his own style.

Kohl, an economic analyst for many businesses in Virginia, expressed an interest in Cornell last fall when he contacted the agricultural economics department about the possibility of taking a leave of absence from Virginia and working at Cornell. “I wanted to study another region,” said Kohl. “I’ve come to realize that you don’t really know something until you try to teach it.

Visiting Professor Dave Kohl brings new energy to business management. I wanted to know about New York and the areas around it.”

In June, he, his wife Kendra and their two sons, Kasey and Kyle, moved to Ithaca. “During the summer I had to travel a great deal and wrap up some programs at Virginia,” he said. “The family stayed in Ithaca and held down the fort.”

In class, Kohl uses many examples from small business to illustrate the concepts he is trying to emphasize. Because he is actively involved in several agribusinesses, it is easy for him to throw an example of financial analysis, human resource management or another sector of business out to the class.

“Right now I am involved with a farm business, a Holstein export company and a marketing and consulting firm to banks and finance corporations,” Kohl said. “My wife and I run these and each weekend, when I am not involved with class preparation, we go through the statements together and analyze our goals,” he said.

By showing students the potential applications for what they are being taught, Kohl hopes to pique their interest and motivate the class to understand the importance of business.

Becka Wood ‘88, one of the two administrative teaching assistants for Kohl’s course, coordinates the activities of six teaching assistants and eleven graders. “We have a great staff and Professor Kohl allows us to develop in the positions we hold. He delegates authority and is a fantastic motivator,” she said.

Kohl said that he is very pleased with the staff. “I am very lucky to be surrounded by a dedicated, talented and professional staff,” Kohl said. “Having taught for ten years, I have solid expectations of where this course should go and where I want it to go. The staff helps me fulfill both of these,” he added.

“Professor Kohl explains the theories behind business management in an animated and interesting way,” Mark A. Klopfes ‘88 said. “He constantly points out the relevance of an idea to emphasize what he teaches,” he added.

Kohl has not made any definite plans for after this year and is keeping his options open. Right now he considers himself very lucky to be able to experiment with some programs at Cornell.

by Alexander S. Chisholm '89
Farming for

There is something about a Christmas tree. It brings magic to the holiday season by decorating an entire community as well as several homes. For many, the Christmas tree is a tradition, but it is also the root of a potentially profitable business.

The National Christmas Tree Association (NCTA) is for individuals and companies involved in the production and sale of Christmas trees and related products. The NCTA reported that about 33 million trees were sold in 1986.

Christmas trees grow in almost every state in the nation. The NCTA predicts that Oregon will harvest the most trees, 5.6 million, in 1987. Michigan is expected to be close behind, harvesting 5.3 million trees. John Webb, executive secretary of the New York Christmas Tree Growers' Association, estimates that New York will harvest about two million trees.

People used to go to the forest and cut Christmas trees for themselves and to sell in urban areas for the holiday season. Within the last 30 years, however, most Christmas trees have been plantation-grown. Choose-and-cut farm owners, like Barbara Wilkins of Fruit and Fir Farms near New York City, welcome consumers to select and cut their own trees. Wilkins reported that her farm sells $70,000 worth of merchandise in six days.

According to the NCTA, each year one million acres of land are planted with Christmas trees, and 100,000 people are employed by the industry. David Baumann, NCTA staff member, said, “Christmas tree farming is very labor-intensive. Growers maintain individual contact with each tree at least twice a year.”

Christmas tree farming begins in a nursery when seeds are planted and grown for two years to become seedlings. Each year 96 million seedlings and transplants are taken from nursery beds and planted to replace harvested trees.

Trees grow from five to sixteen years or more before they are sold. The growing period depends on tree species, geographic location and marketable tree size. There is also a factor for potential damage by weather, insects and disease which will affect the total number of trees harvested in any given year.

Growers weed the fields, and each year young trees are shaped or pruned. Finally, Christmas tree farmers harvest the mature trees. It can take up to five years to clear the field for replanting. Some growers maintain the field by interplanting each year to replace the harvested trees. Tree planters, balers and elevators increase the farmer’s efficiency.

Kenneth L. Franke ’50 is a Christmas tree farmer in Marion, New York. After 42 years in the business, Franke now sells between 8,000 and 10,000 trees each year. “There is a lot more work to it than most people think,” he said. “It takes a lot of know-how and experience. I’ve learned a lot by trial and error.” Franke’s business is profitable, but like other Christmas tree farmers, he has had to deal with the competing

Farmers mow Christmas tree fields to remove weeds which can add several years to the harvest time.

Living Christmas trees sold by Kenneth Franke ’50 can be planted after the holidays.
David W. Taber is a senior extension associate with Cornell Cooperative Extension in the Department of Natural Resources. He divides the market into thirds—30 million homes with real trees; 30 million homes with artificial trees; and 30 million homes without any Christmas trees. “People buy what suits their needs. Artificial tree manufacturers are now adding fragrance to increase the marketability of trees,” he said.

Franke observes a demand for higher quality real trees. “Kids just don’t go for artificial trees,” he said.

Lawrence Hunt ’34 has raised Christmas trees for 35 years. He is in business in Ithaca with his sons, caring for about 100,000 trees. Hunt sells at wholesale and retail. He begins his Christmas tree sales the weekend after Thanksgiving. Area students buy his trees to decorate their apartments and dorms.

For the past five years Hunt has sold trees to the Agronomy Club in the College of Agriculture and Life Sciences. Club advisor Ray B. Bryant, associate professor in the Department of Agronomy, said the members sold 175 trees in 1986. “This year the club plans to sell 250 trees,” Bryant said. The Agronomy Club usually charges between $10 and $12 for the trees.

Taber said most Christmas trees range in price from $15 to $50, with many trees selling for about $25 to $35. “The price depends on the quality of the tree, its species and the marketing location,” he said. Blue spruce and eastern-grown Douglas fir trees are generally more expensive.

According to the NCTA, nearly three million trees are shipped to the United States from Canada. Christmas tree farmers also compete with other national growers.

Each year a grower from each competing state wins the state championship. The NCTA then selects a national grand champion, who sends a tree to Washington for the White House Blue Room.

The National Christmas Tree Lighting Ceremony has also become part of the annual holiday observance.

Enjoy this holiday season, but every time you see a decorated tree, just remember—there is a grower out there who has spent years to make your holiday brighter.

by Sharon L. Detzer ’88

One million acres of Christmas trees are planted each year in the United States, according to the National Christmas Tree Association, and this little boy is having a hard time picking out which tree he wants.
Asian American students must understand their own identities, and, further, all students must learn about Asian American heritage and history, said Professor Lee C. Lee. The Asian American Studies Program was established to fulfill these needs, according to Director Lee.

To fully provide for these needs, three primary goals were developed. The first is establishment of a teaching program offering broad, basic courses about the Asian American experience through various departments and colleges. In the spring of 1988, for example, associate director Sharon Lee will teach an introductory course on the sociological history of different Asian American groups. The course, offered by the Department of Rural Sociology, will outline these groups' immigration, history, adaptation and assimilation into American culture. Eventually, the program may develop one or more concentrations in Asian American studies.

The incorporation of material about Asian Americans into relevant University curriculums is another primary goal of the teaching program. "There is a strong need to mainstream Asian American information into many academic curriculums because, despite the fact that Asian Americans have historically played an integral part in American society, they are still set apart," said associate director Lee. "We need to incorporate materials about their contributions into relevant courses such as American history, and sociology," she said.

The program will also serve to stimulate and generate research on topics related to Asian Americans. Research and course development grants will provide funds for faculty to develop teaching material or courses and encourage research on Asian American topics at Cornell, said associate director Lee. By developing an extensive bibliographical data base, the program will function as a resource center for its affiliated members. It will also encourage joint projects with other ethnic programs and faculty on campus. Currently, the program's administrators are conducting research on Chinese immigrant children in New York City.

The Program's third primary goal is to foster and promote Asian American culture and arts, said director Lee. The program's office will serve as a resource and activity center to provide a place for social interaction among Asian American students and members of the Cornell community interested in Asian American culture and arts, she said. Further, the program will sponsor events to stimulate understanding of the Asian American identity. Currently, it is organizing a symposium on Asian Americans and higher education to be held in spring 1988. The program also hopes to sponsor and arrange for guest lecturers to appear on campus. In its goal to develop programs and events which will bring the various ethnic Asians together, the program has established a student committee comprised of interested members of each Asian group at Cornell. "It will be a means of direct communication between the student organizations and the program, as well as create more unity among the different groups," said director Lee. Two members of this committee will also serve as student members of the program's advisory board.

The program, which, according to director Lee, "took many years of work by different generations of students and faculty," has already generated much interest and support. Currently, approximately 15 humanities and social sciences faculty members drawn from various departments and colleges of the University are affiliated with the program. "There is indeed an interest, especially among Asian Americans," said Helena Huang '88, a student assistant working as the Resource Coordinator and Planner for the program. "Once students realize how much there is to know about Asian American history and culture and how much the program has to offer, interest and participation will be especially strong," she said. "Asian American heritage is rarely understood. That is why there is a need for programs like the Asian American Studies Program. It can really help educate and unify Asian Americans and the general Cornell community," said Mona Wu '89, an active member of several Asian American groups at Cornell.

The program has primarily been working to build a solid foundation on which to accomplish their goals this fall, 1987. It is fulfilling such basic needs as setting up an office in Caldwell Hall, building files, establishing outreach and networking with other Asian American programs, and informing the Cornell community about their offerings.

"If we are really successful, then Asian American studies will become such a regular part of course offerings, programs and research that our duties will be obsolete," said Director Lee.
“We didn’t have this conference just to start an academic controversy,” said Susan Dixon, who coordinated “Cultural Encounter: The Iroquois Great Law and the United States Constitution.” “Rather, we wanted to allow scholars from two different cultures who haven’t had the opportunity to share their knowledge together do so face-to-face,” she said.

The conference, sponsored by the American Indian Program, took place at Cornell on September 11-12, 1987. This was one week before the bicentennial anniversary of the signing of the United States Constitution. The meeting focused on the effect of the Iroquois Great Law of Peace on the formation of the Constitution, and featured speakers both from academia and the American Indian community, Dixon said. Approximately 400 people of different backgrounds attended the conference.

During the weekend, lectures by scholars such as Dr. Donald Grinde of California Polytechnic Institute and Dr. Bruce Johansen of the University of Nebraska were combined with those of American Indian leaders like Audrey Shenandoah, an Iroquois Clanmother, and Thomas Porter, Bear Clan Chief of the Mohawk tribe. The American Indian Program sponsored activities for conference participants in the traditional gatherings of the two cultures. A reception at the Andrew Dickson White House and an Iroquois Social Dance at the Holland International Living Center added a touch of festivity.

The emphasis of the weekend, however, did revolve around the Constitution and the Great Law. “We wanted to make people aware of the connections between the philosophies of the Iroquois and the framers of the Constitution,” Dixon said. She said that although many people are aware that Benjamin Franklin was active in Indian affairs, the extent of American Indian influence on his and others’ political thought and action is just now being studied seriously.

The Iroquois Great Law of Peace was handed down by the Peacemaker a long time ago. “It pre-dates the Constitution,” Dixon said, “and there are only dated examples of people who have referred to its past.” The body of the Great Law has existed orally for many generations, and a highlight of the conference was its history as told by Jake Thomas, a Cayuga Elder and Faith-keeper.

The foundation of the Great Law is that people behave in a rational manner, Dixon said. “The Iroquois’ political system is based on consensus, not voting. You go to your enemies and try and work everything out. If it becomes impossible to talk, then there is violence, but only after all the possibilities for peace have been exhausted,” she explained.

The American colonists admired the Iroquois’ League of Six Nations because it was so unified. The tribes were separate entities with the freedom to do as they chose, but they had the assurance of protection from the entire League if it was necessary. This system parallels that of the early United States as defined by the Constitution.

“Cultural Encounter: The Iroquois Great Law of Peace and the United States Constitution” provided the first forum for those interested in the relationship between Iroquois law and the Constitution. The topic is only now being studied in depth in part because our culture has not been prepared to acknowledge its depth.

“We see what we expect to see,” Dixon said. “We have seen our democratic system as one that came from Europe. We haven’t recognized that it stands to reason that the framers of the Constitution would be influenced by the people around them—the American Indians.”

Now that the American Indian Program has brought scholars of the history of the Indian and colonial cultures together, more information will be available for the study of the relationship between them. Transcripts and articles about the conference will be published in an upcoming edition of the Northeast Indian Quarterly, the journal of the Program. Audio and video tapes will serve as a resource for curriculum development for New York state public schools. Most importantly, Dixon said, this conference paved the way for future “Cultural Encounters,” which may enable non-native and native American cultures to learn even more from each other.

by Molly Clifford ’88
Imagine spending a summer six miles off the Maine and New Hampshire coasts surrounded by three miles of rugged granite coastline and thick, low lying vegetation which is unspoiled, yet accessible. Sound interesting? Now imagine it as a college summer program. Intrigued?

Appledore Island is the site of Shoals Marine Laboratory, a cooperative venture of Cornell University and the University of New Hampshire, offering undergraduates, beginning graduate students and others a unique opportunity to study marine science. This 95-acre “summer at sea” is the largest of the nine Isles of Shoals.

In-class studies are offered by Shoals complemented with outdoor field experience. Some are very biology oriented, such as Field Marine Science, a six credit course which focuses on areas such as biological oceanography, marine geology, fishery biology and the effects of human activity on marine environment.

Coastal and Oceanic Law and Policy is another course at Shoals which is not as heavily concentrated in the biological sciences. This course focuses on legal aspects of management relating to marine resources including subjects such as law and policy related to ocean dumping, environmental impact systems, fisheries management, and offshore gas and oil production. The course concludes with a case study and a mock hearing.

These are only two of the 20 courses to be offered for credit in 1988. Many students choose to take only one course during the summer, however those who qualify can earn up to 15 credit hours in a wide range of studies pertaining to marine sciences or possibly focusing on one field of interest.

These courses are taught by faculty from Cornell University and the University of New Hampshire as well as other academic institutions. There are also numerous guest lectures and outside field trips. These trips include visiting seabird and seal colonies on neighboring islands, observing fishing vessels and whale watching.

Dr. J.B. Heiser, PhD ’81, Director of Shoals Marine Lab since 1979, said the program was started because finding a high quality educational opportunity for Cornell undergraduates in marine sciences was a problem back in the 1960s. Approximately 200 students from various universities in and outside the country enroll at Shoals for credit, of which 10 to 15 percent have spent a summer on the island before. “A person from almost any discipline you name can find some aspect of Shoals that will be of interest to them,” said Heiser.

One must keep in mind that the Laboratory is an intense learning experience, even for those not taking courses for credit. Participants and faculty members literally immerse themselves in their studies with the advantage of no outside distractions.

Brian Helmuth ’89, an ecology and systematics student, spent four weeks at Shoals during the summer of 1987 as a student in the Field Marine Science course. “You’re living marine science every day,” he said. “The first two weeks were intense. We were learning and memorizing species after species. I’ve never learned so much in two weeks, but I loved it.”

Later in the program, Helmuth added, students applied this “intense” education to field studies and experiments. He and his class of 32 students conducted transect studies in which teams of two people are assigned specific areas of the island. Students must identify and quantify what is in these areas, searching for marine life.

Unlike many other academic programs, Shoals offers students something which is unique compared to other learning experiences they may have had. Although the program is educational, Shoals does not create a lecture hall atmosphere in the classrooms; it creates a community.

“I find it hard to think of it as a class,” Helmuth commented. “You live with the professors and the students, you talk to them as friends, while still
All eyes look to learn. These students are participants in the Field Marine Science course, where students apply classroom knowledge.

respecting their knowledge.”

Not all students were there for course education. Andie Newman ’87, presently a first year student in the College of Veterinary Medicine, was a field assistant for Roy Levien, a doctoral candidate in the field of neurobiology and behavior. She helped in his study of the communication of honeybees while carefully selecting among many potential nest sites. She agrees with Helmuth’s feelings about how the student-faculty partnerships were definitely a unique and profitable experience.

Commenting on the Island as a whole, Newman said she loved the setting. “It gave me a chance to see things I never would have seen. There’s nothing like getting up at 4 a.m. to go out and see fin whales and dolphins in their natural habitat,” she claimed.

Heiser would like to see more non-majors involved in the program because they have an interest in marine life. Although Shoals has a larger number of university students than any other field station in North America, Heiser is still concerned about the field as a whole. “There are about 5000 undergraduates per year in North America learning about the marine environment from field station courses. A greater number of students are enrolled every year in the various introductory biology courses, for example, offered here at Cornell.”

“When 70 percent of our earth is covered by sea, students should have a compelling interest to learn about it,” Heiser continued. “In the future we will undoubtedly increase our dependence on the marine environment.”

Shoals does more than teach students about marine life; it teaches them about themselves, at times opening new doors or reinforcing pre-existing interests.

Newman would return to Shoals because of the invaluable experience it gave her. “Shoals sparked an interest in marine life and, as a veterinarian, I may pursue a career in that, studying what the field of veterinary medicine can do for marine life,” Newman commented.

“After spending a summer at Shoals, I know that I want to continue my studies in marine science. This is what I really want to do,” Helmuth stated.

Would he return? “In an instant,” he said.

Although Shoals is a teaching lab by the sea, it lacks the pressures and the distractions that can make learning unpleasant at times. Its natural environment and the sense of community and camaraderie between the students and staff make this more than just a learning experience; Shoals becomes an addiction. □

by Andrea C. Fierro ’89
Speaking of Smith

The thought of making a public speech would make most people extremely nervous. Furthermore, the thought of standing up in front of Bailey Hall and addressing an audience of a thousand or more would absolutely terrify most of us. But for Kelly Smith, a senior in the College of Agriculture and Life Sciences, public speaking is not such a nightmare.

In August, 1987, Smith was asked to welcome in the new freshmen at the ag college convocation held in Bailey Hall. Her goals throughout the speech were to point out the vast opportunities that are present at Cornell and to make the freshmen feel as though they were now a part of the college.

The mass of faces peering up at Smith throughout her speech did not make her in the least bit nervous. “It was easy for me to get up and speak to the freshmen because I know what a wonderful place Cornell is. I could not get up and speak about something I did not believe in,” Smith remarked. Smith stated that it was a real thrill and an honor to be asked to represent the college. “It was an honor that the college trusted me to speak up there, because I did not trust myself,” she said.

Smith noted further that “speaking at Bailey Hall to the freshmen opened up a lot of doors for me. Until then, most of the people in the administration did not know me. Afterwards, everyone seemed to know who I was and I found that I was able to use those new resources both personally and in aiding the Ag Ambassador organization,” a program of which Smith is the president.

The Ag Ambassador program at Cornell has played a big part in Smith’s life. She became a member as a sophomore, and as a junior she served as the Director of Alumni Activities for the program.

While Smith acted as the Director of Alumni Activities, she elected to speak twice a month at alumni dinners. This involved travelling to places such as Buffalo, Albany, Saratoga and Westchester County. “I volunteered to speak because I wanted to keep in touch with the alumni, and I wanted to become better acquainted with them so I could bring back what I learned to the ambassadors,” she said.

John Sterling, the Director of Alumni Development, approached Smith and asked her if she would speak to the alumni at Homecoming Weekend on behalf of the students. Smith took this opportunity without hesitation. “I must admit, I did feel a bit nervous before addressing the alumni since five outstanding alumni were being honored, and my parents were in the audience,” she commented. Smith stood up and presented an outstanding speech despite being nervous and wanting to hide when she finished.

Smith attributes much of her speaking success to a superior speech training program she participated in during high school and from acting as a teaching assistant (T.A.) for the oral communication course offered by the ag college. “I learned a lot from being a T.A. because I saw what others did wrong and what technically worked for other people,” she said.

What is interesting is that Smith ad libs all of her speeches. “I have ideas in my head that I want to talk about, and I memorize a few key phrases that help me make transitions,” she said. Smith does not use note cards because they make her more nervous. “Appearance wise, this may make me look like a smooth speaker because I always keep eye contact,” noted Smith.

In addition to being the president of the Ag Ambassador program, Smith is the rush chairman for Delta Delta Delta sorority and vice president of the Quill and Dagger organization, a senior honor society made up of 40 students who show leadership on campus.

Smith is an agricultural economics major and is interested in a career in finance. She would like to return to the Chicago area, as she is from Wheaton, Illinois just outside of Chicago. Smith entertains the thought of business school, but that would be later.

Until graduation, Smith is making the most of her Cornell days. “Cornell has given me a lot of opportunities, like working with the alumni,” she said. Smith stated that she would not be so excited about Cornell if she had not had so much contact with alumni. “Their excitement makes this place seem more special because it shows that Cornell will stay with many students throughout their lives,” she said.
A New 'Boss' in the Making

by Nina Fastenberg '88

Move over Billy Joel, Bruce Springsteen (The Boss), Elton John... Joel Simon '89 is headed for the top. A junior agricultural economics major in the College of Agriculture and Life Sciences, Simon is embarking on a music recording career. And it looks as though he will soon reach his goal. At the age of twenty, he has already written and recorded eighty songs, broadcast his music on major New York City and Ithaca radio stations and is presently involved with a producer and an entertainment lawyer in Manhattan, who are working to sign him with a prominent record company.

Simon, who grew up in Dix Hills, New York, began playing the piano in the third grade, in an effort "to get attention" from his parents. After taking lessons in classical music for eight years and having studied with a variety of piano teachers, Simon decided to practice on his own and to begin writing music. His natural ability to play by ear facilitated his task to compose. "That's my forte—listening and playing what I've heard without looking at any notes. Music becomes your own interpretation because you're not restricted by sheet music," Joel remarked.

Music has been a central aspect of Simon's life since junior high school. He organized his first band "Trilogy" in the ninth grade, playing the piano, the drums and the synthesizer (Simon also plays the trumpet, baritone, percussion and saxophone). In his junior year in high school, Simon's career reached a plateau when his band won the 1984 "New York State Battle of the Bands," ranking first among 999 other competitors.

While Simon's early music was "unstructured and exciting," he moved away from the progressive style and began writing "more memorable lyrics and themes that are more concise and effective," by his senior year in high school. His present material can be best described as "mellow rock," comparable to the works of Billy Joel, Elton John and Neil Diamond, three of his favorite artists. "The music I'm writing now is the best I've written so far. The older you get, the more mature you get, and this is reflected in lyrics, music and the way a person thinks," Joel said. These songs are unplanned and usually arise in a most accidental manner. In an astronomy lecture earlier this semester, the professor was talking about "looking into a telescope and seeing endless nights." Out of that idea emerged a song, "Endless Summer Nights," which Simon wrote that evening. "It [writing music] happens when you least expect it. If you force it, it will sound forced," asserted Simon.

Simon's career has really come full circle, from playing in concerts in the eighth grade to presently hiring a producer and an entertainment lawyer in the hopes of signing a contract with a major record company. In order to sign a contract, a musician must affiliate himself with a manager, who introduces the client's music to industry contacts. Unfortunately, Simon's three managers were unsuccessful and he was forced to "shop his tapes around" to record companies. "At the age of 20, I've been thrown out of more buildings and have been rejected more than most people have in a lifetime," said Simon. Ironically, these many discouraging encounters also enabled him to grow. "At least I can deal with people a lot better than most people my age on a corporate and personal level," said Simon. It appears that Simon's luck is about to change. With an entertainment lawyer noted for such successes as Air Supply and The Police working for him, Simon feels he is finally in good hands. They are putting together a package that includes a master tape, studio pictures and possibly a video. While Simon has hired professionals to market his music, he is currently looking for investors.

It may be paying off very soon for Simon. Both Simon's entertainment lawyer and producer are "very optimistic" about his future. With parental, emotional and financial support behind him, not to mention star-quality music, Joel is destined to reach his goal—"to sign a record contract and attain the status of a well-known and respected recording artist."

Remarkable on his pending career, Simon noted that "There's a difference between making a record and making a successful record. If I sign a contract, I will indeed be satisfied, but not until I make a successful record will I be at peace with myself."
Gould Colman '51 PhD '61 found a unique way to gather information from farm families who were dissatisfied with how farming was explained in the academic world and in the public press. Every time Colman went to visit a farm family, he would take along a tape recorder and wear a suit.

Of his suit, Colman, an archivist in the Division of Manuscripts and Archives of Cornell University's libraries, said, "It was a sign of respect." The tape recorder, however, was instrumental in collecting the oral histories of 33 New York and Iowa farm families as part of a project that began in 1967 and is continuing today.

Was it hard to get farm families to open up to a stranger armed with a tape recorder? "Not as hard as you'd think. This project began with dissatisfied people. When approached with the promise that their point of view would be used to explain farming, the families who had contact with the University through a branch of the Cooperative Extension were willing to set the record straight for the mass media. "Even a farm family's neighbors who were non-farmers knew little about farming," said Colman.

"From about the 1920s through the 1960s, when this project started, 'til recently, the academic literature described farming as an economic enterprise, with profit as the singular objective," noted Colman, who himself grew up on a farm. "Instead, we found that the production of farm goods was integrated with the production of the family," he said.

Explaining the impetus for the project, Colman said, "Usually research is like a puzzle—like a design. You fit information you've gathered into the design, which is your hypothesis. We didn't do that. We knew that the design promoted was inadequate, but we had no alternative to offer. We just talked to people and hoped for a more adequate explanation."

This approach mirrored the twin aims of the project. The first was to gather primary source material on how farm families evolved through the descriptions of the family members themselves. The second goal was to create a store of information that could later be used by researchers interested in decision-making processes in farm families.

There are a few main differences between typical research based on documents and research gathered from oral histories. First of all, research gathered from letters, books, newspapers or other documents tends to give information on only those who have the education to leave behind a written record. Oral

Left, father and son discuss the operation of their dairy farm near Groton; above, Laurie Todd gets help from son Samuel in the raspberry patch; opposite, Grandfather Todd and grandson work in the strawberry fields. People shown in these pictures did not necessarily participate in the project.
histories can highlight the lives and experiences of those who might not be able to read and write, or would not otherwise consider leaving behind documentation of their lives.

Although the farm families interviewed were certainly literate, they may not have considered their lives to be of particular interest to anyone but themselves.

According to Colman, oral history gathering also allowed spontaneity and immediacy that otherwise might not have been achieved. "One thing about doing an oral history is that the researcher and the subject have the capacity to be simultaneously affected by each other through their interaction with one another."

For example, the original approach of the researchers was to think of the decision-making process as a highly rational one. "Supposedly," said Colman, "you isolate the problem, examine the alternatives, and come up with an answer. But we found decision-making to have a largely emotional element sometimes, involving patterns of behavior, loving care and conflict. Sometimes a person's place in the family cycle affects decision-making."

Realizing this convinced the researchers to abandon their "mechanistic model," as Colman termed it.

A part of the original approach that was retained was the concentration on gathering multiple perspectives. This was done by conversing with the husband, wife and children each time the family was visited, and continuing to do this on each visit over the next 15 years. To break the ice, and to present situations that were fairly consistent from family to family, Colman would ask the family to participate in a Monopoly-like board game. "We had a poultry set, an orchard set and a dairy set, all different kinds," remembered Colman. "The 'chance' cards would say things like 'Your corn crib blew down, it's $500 to fix.'"

Another research method was the stimulus soap opera. A family was presented with a fictional situation, such as the father purchasing a snowmobile without consulting the rest of the family, and then the actual family would react to the situation. They would often draw upon similar events that had occurred in their own lives, recalled Colman.

Yet another way of achieving multiple perspectives was comparing the responses recorded in informal conversations between a family member and an interviewee to the ones resulting from a stimulus soap opera or a game. "Often they described how they would like to be instead of how they were, quite understandably!" commented Colman. "But as with anything else, the more perspectives you can bring to bear, the more likely you are to understand how family and farming are integrated."

The whole story, or as much of it that Gould Colman and co-author Sarah Elbert can piece together, is exactly what an interested reader will get in Colman's soon-to-be-published book. It will summarize the information collected in the past fifteen years, and as Colman hopes, "It will prompt a reader to say, 'Oh, now I understand; this is how farming differs from other occupations and why it has survived as a family enterprise.'"
Family Ties

Each year, over 3,000 Cornellians graduate and go out into the "real world". Some will find a career that will dominate their lives and choose to remain single. Of those who marry, some will choose to marry their fellow Cornell sweethearts. They will probably have children, and some of them will undoubtedly end up at Cornell.

Being a second generation Cornellian can be not only very exciting, but also a time for learning how generations change. Although some things remain the same, some things which held true in the early 1960s are not necessarily true in the late 1980s, as Alison Campbell '89 has discovered.

Alison, daughter of Roland Campbell '63 and Glenda Davis Campbell '63, has found that Cornell has different things in store for her than her parents encountered here.

"When I was at Cornell," Glenda Campbell recalled, "life was very strict. There were no co-ed dorms and we had a 10:30 p.m. curfew every night as first semester freshmen. We were allowed to take two late nights a week; if it was a weekday curfew was midnight, and if it was a weekend curfew was 1 AM. There was a desk where one had to sign in and out as well," Glenda said.

Alison on the other hand, has found that her hours are a little less strict. "I have what my Mom considers a 'late night' at least five times a week," she said. "I may not necessarily be out partying, but the library where I study is open until midnight, so even when I am not there it is always a good excuse to tell Mom," she smiled.

The elder Campbell was a lot more involved in activities at Cornell than her daughter is, particularly in the Women's Athletic Association, being a member of the Cornell Women's Basketball team. "The whole thing was funny, especially considering I was only five foot four," Glenda said. "Back then, women's sports were not very established. "There was no women's athletic facility, so instead we practiced in Barton while the R.O.T.C. cadets paraded around.'"

Alison, who is a consumer economics major in the College of Human Ecology, attributes the lack of involvement by many students today to academic pressure. "I'm sure my Dad had as much pressure then as I do now. But I think there is a lot more pressure on women today since they are a much bigger part of the work force. Consequently, men have more pressure to keep up with their new competition," Alison said.

One activity both mother and daughter have in common despite the different eras is Kappa Delta sorority. Glenda served as secretary in 1962, and Alison is currently serving her term as secretary in 1987. However, it was not this easy at the start. "When I rushed," Alison said, "I knew my Mom had been in Kappa Delta, and initially that made me want to go somewhere else so I could be my own person. My Mom stayed out of rush and let me explore all of the houses so that I could make my own decision. As rush progressed though, I found that this was where I wanted to be. I guess my Mom and I are more alike than I thought," Alison said.

Of course there is a difference socially as well. "When I was at Cornell," Glenda said, "dating was the 'in' thing. Everyone was always going out on dates. In fact, Roland asked me out three times and I had another date. I finally cancelled another date the fourth time to go out with him. But nowadays Alison tells me everyone just goes out in big groups; dating is old-fashioned.

"Fraternities were just as big then as they are now," Glenda said. "There were three big weekends each year: Fall, Spring and Inter-Fraternity Council weekends. The guys moved out of their houses so their dates could move into their rooms and live like them for the weekend," she recalled.

"Today," Alison said, "fraternities just have huge parties or formals on those weekends. But the guys would never dream of moving out, and the girls would never dream of moving in. The houses are too dirty," she said.

Ultimately, however, Cornell is still Cornell. It may be a little more modern for Alison than it was for Glenda, but some things will always stay the same. The traditions about the statues on the arts quad and the suspension bridge are timeless. They existed when Roland and Glenda arrived at Cornell in 1959, they existed when Alison arrived in 1985, and they will certainly exist when Alison's younger brother Mitchell graduates from high school in 1988 and heads toward . . .

by Izabella Rudzki '89
"Carrots and lettuce can not be plants because they grow in a garden."

"Raspberries are totally different. They are not really alive. They don't talk, eat or sleep."

"The plant needs food and water." (What does plant food look like?) "It's blue."

Misconceptions such as these are being identified and clarified by a model elementary life science curriculum being carried out at the Cornell Plantations called LEAP—LEarning About Plants. The program, directed by Julie Shattuck of Cornell Plantations and funded by the National Science Foundation, helps elementary school students learn about the key biological concepts, such as photosynthesis.

"Children think that plants get their food from the soil," said Robert E. Cook, associate professor of ecology and director of Cornell Plantations. "But plants actually make food. In fact most of the mass of plants—food plants or giant oak trees—comes from 'thin' air, from the carbon in carbon dioxide."

"LEAP is not just about plants," said Cook. "It is basic science education. Plants are a good medium and a natural introduction to concepts in science."

"The LEAP curriculum teaches kids understanding whereas other science programs just teach facts," said Shattuck. She said the program, which collaborates with faculty in the Department of Education, is based upon teaching science concepts through hands-on activities. "Children learn through field experiences and experiments, and discussion is particularly emphasized," said Shattuck. The Cornell program coordinators work closely with teachers at nearby Trumansburg Elementary School where LEAP is being tested and evaluated.

The model curriculum seeks to identify children's pre-existing ideas, teach basic science concepts and also develop teachers' abilities. Children are interviewed to determine their beliefs about life sciences. A researcher may ask a child, "What is a seed? What does it do? What does it need to live and grow?" according to Shattuck. "Children's personal theories get stuck in their heads, and by telling them the right answer they still may not change their theories," said Shattuck. That is why LEAP enables children to conduct their own experiments and personally prove which theories are correct. After areas of misunderstanding are identified, the science curriculum is taught accordingly to address the problem concepts.

Teacher development is emphasized as much as the curriculum itself. "Teachers have got to want to use LEAP for it to be successful," said Cook. "Teachers have been very receptive. They feel more confident teaching science when they fully understand it." LEAP provides a support system for teachers which includes workshops and, in the future, videotapes of model teachers.

The Trumansburg students visit the Cornell botanical gardens and the arboretum for field trips, but the model program will be adaptable to other gardens or schoolyards.

The curriculum is expected to be fully developed and evaluated by the summer of 1989. The model will then be available to other schools across the nation. It is designed for teachers with a general elementary teaching certification and no specialized training in science. The materials will be appropriate for kindergarten through sixth grade.

Previously, science education has been sporadic and uncoordinated. Children have been unable to develop understanding in this manner, said Shattuck. LEAP is an articulated curriculum which builds on ideas taught in the earlier grades. Students, therefore, develop an understanding of concepts from the bottom up.

Children find plants a fun way to learn about science, according to Cook, and LEarning About Plants may spark interest in other subjects, as well. A Trumansburg teacher said, "If you've got kids getting curious about the world out there, you've got their minds and you can teach them anything."
Have you ever thought about what your life would be like if you were confined to a wheelchair? Imagine rolling your wheelchair up a building entrance ramp, only to discover at the top that there is not enough room to maneuver the chair through the doorway. Or, picture yourself on crutches waiting for an elevator on the first floor, only to find out that the elevator operation key you need is located on the second.

For Ceil Blumenstock grad '87, human ecology, these situations are part of the daily routine she has come to accept after years of making her way up, down and across the Cornell University campus in a motorized wheelchair. As a temporary employee for Cornell's Office of Equal Opportunity, Blumenstock took advantage of this experience to conduct a campus-wide study of building accessibility for the physically-disabled.

According to Joan B. Fisher, Coordinator for Disabled Services and director of the study, the purpose of the investigation is two-fold.

"First, we want to compile information about the accessibility of every University building and facility to individuals with mobility impairments," Fisher said. "Second, we plan to use this information to update a campus guide which we distribute to both potential and currently-enrolled students with disabilities."

Many people believe that an accessible, barrier-free environment is necessary only for those who use wheelchairs, Fisher said. Not many people realize that individuals on crutches, in casts or with less visible handicaps such as arthritis and muscle disease also benefit from this type of environment. Recovering stroke and heart attack victims, as well as parents with strollers, also appreciate buildings that are barrier-free.

At this time, however, many of the buildings on campus deny access to individuals with mobility impairments.

"Virtually all the buildings which were constructed when the school was first built are inaccessible to the persons with disabilities," Fisher said. "Back then, these individuals didn't go to college—much less leave the house—so there was no reason to make public buildings accessible."

During the four weeks of the study, Blumenstock entered — or tried to enter — every building on campus. Once inside, she evaluated the accessibility of restroom facilities and building elevators.

Among those buildings that Blumenstock determined to be completely inaccessible, due to a lack of wheelchair ramps and/or wide-enough entrance ways, are Tjaden, Sibley, Balch, McGraw, Olin and Lincoln halls. All of west campus, because of its location and its numerous stairways, also denies access to persons with mobility impairments.

In addition, Blumenstock classified campus buildings as partially-accessible or fully-accessible, depending on the ease with which she could enter and use the elevator and bathrooms. The elevators in many buildings, for example, are too small for a wheelchair, Blumenstock said. In addition, the button-control packages for most of the older elevators on campus are placed too high for individuals using wheelchairs to reach.

According to Blumenstock, the College of Human Ecology is the most accessible of all of the University's colleges. The College of Agriculture and Life Sciences is "sort of" accessible, while some of the other colleges in the University are even less so.

"It's really ironic," Blumenstock said. "The school that is least accessible to the physically-disabled is the College of Architecture—the one place that you'd think would attempt to be the most accommodating."

Although the law does not require that older buildings be adapted to meet the needs of the physically disabled,
Elevator buttons are often too high for those in wheelchairs.

there are strict rules regarding the construction of new buildings. Section 504 of the Federal Rehabilitation Act of 1973 mandates that every building constructed after 1977 meet the standards of accessibility set by the American National Standards Institution (ANSI). These standards regulate, among other things, the width of building entrances and the incline grade of wheelchair ramps.

The New York State Building Code which was passed in 1984 has even more comprehensive requirements. For example, while ANSI requires that every building have at least one accessible entrance, the 1984 code mandates that all building entrances be accessible.

According to Fisher, one main problem with the current legislation is its enforcement. There is no real punishment for non-compliance, except in instances when construction is funded by the government. In these instances, the government withholds money until the builder makes the necessary corrections.

Another problem with this law is that builders are not required to adapt older buildings to meet present-day standards. As a result, these buildings remain inaccessible to individuals with disabilities, Fisher said.

"The general excuse made by society is that making a building barrier-free costs too much. My point is that if you plan for building accessibility from the very beginning, you can avoid these extra expenses."

Blumenstock suggested assigning students in the architecture college to the project of determining how to make every campus building completely accessible.

"There is so much brain power at Cornell. It would be wonderful to see some of it being used to help the physically-disabled of our campus community," Blumenstock said. Such an assignment would give students experience in accessibility planning—an essential tool for the future architects, she added.

According to Fisher, however, there would not be as much of a problem with accessibility if the public were more sensitive to the number and the needs of those with mobility impairments. One out of every seven people suffers from a disability of some type, Fisher said. One out of three under the age of 65 will be handicapped temporarily for three months of his life, Blumenstock added.

"Sometimes, the ones who fight building accessibility reconstruction don't take into account that they themselves are only one accident away from becoming physically disabled," Fisher said.

The public must realize that what makes life livable for the disabled does not make life difficult for everyone else, Fisher said. Minor adjustments in bathroom and elevator size, in the placement of door handles and elevator buttons, and in the re-positioning of entrance-barring furniture can benefit both persons with disabilities and non-disabled individuals.

Increasing the public's awareness about the physically-impaired is not difficult. In the state of Minnesota, the Governor requires every state employee to spend one working day in a wheelchair to experience first-hand the inconvenience of being disabled, Fisher said. Minnesota law reflects this higher level of sensitivity toward the physically-impaired; its regulations for building accessibility are among the strictest in the nation.

Fisher expressed confidence in the capability of the public to learn more about the problems that the disabled have with inaccessible buildings.

"The fact that this study has been funded is, in itself, an indication that the Cornell community is concerned about the right of persons with disabilities to have access to all buildings and facilities on campus."
Did you ever want to see what a male kiwifruit plant looked like? Have you ever wanted to closely examine an authentic cranberry bog? A plethora of currants and blueberries, raspberries and blackberries are all on display at Cornell’s new fruit demonstration plot.

Nestled inside the Cornell Orchards on Route 366, the plot, produced in May 1987, is the brainchild of the Pomology Club. The idea for the plot was conceived in an attempt to promote interest in fruit and to make the Club more visible in the community. Publicity for the plot will be handled primarily through the Pomology Club and the tour guides at the Orchards.

Assistant pomology professor Marvin Pritts views the plot as a tool to educate New York homeowners and students about the numerous options available in starting one’s own home garden.

“We want to show homeowners that other fruits such as gooseberries and currants can be attractively landscaped and amenable in a home garden,” commented Pritts. “People can get exposure to different fruits and get different ideas on what they can plant. They’ll realize that you do not need an acre to grow fruit—you can do it in a relatively small area.”

Jodi Wiener ’88, a Pomology Club member, feels that the plot links agricultural issues at Cornell to the larger community. “The plot is a novel approach to generate interest in agriculture in the surrounding area. It is a liaison between Cornell and Ithaca homeowners,” Wiener said.

Janyce Melissa Wiener ’88

The plot dimensions are 50’ x 30’, a reasonably sized area for the cultivation of fruit. Design technician Marcia Eames-Sheavy ’83, drawing from her ornamental horticulture background, developed a colonial garden design for the plot. The garden, according to Eames-Sheavy, is an aesthetically pleasing one.

“The garden design is a formal one as opposed to naturalistic—the plants are grouped together and it allows for easy upkeep. We have many different types of plants, but they do not look cramped or crowded,” noted Eames-Sheavy.

Plants were donated by local and mail-order nurseries, some from as far as Michigan. The garden contains, among other fruits, hardy and hybrid blueberries, blackberries, elderberries and currants in addition to raspberries and apples. Trees grafted onto dwarfing rootstock surround the outer edges, making for an attractive border.

One “berry unusual” type of fruit in the garden is the day neutral strawberry. One usually plants strawberries in April and waits for them to flower the following spring after shorter day lengths in fall have stimulated flower bud initiation. Day neutral cultivars, however, have a gene that confers insensitivity to daylength. It enables gardeners to pick fruit the same year that it was planted, and from June through October in subsequent years.

The garden’s environment is often altered to accommodate the various fruits. Sulfur was added to a section of the plot to decrease the pH factor for successful blueberry production, whereas lime was added to increase the pH for other fruits. Hardy kiwifruit and cherries from Siberia required a special kind of care tailored to their own requirements.

Pritts hopes to incorporate the pomology fruit demonstration plot into his small fruits course. Recognition of fruit variety is his ultimate goal. “We want to make people aware of the diversity of fruits that can be grown in New York state. New York state is almost synonymous with apples, but we are second in production of tart cherries and grapes,” said Pritts. “We also place in the top ten in blueberry, raspberry and strawberry production.”

Pomology Club president Renee Schloupt ’88 sees the plot as a gift for future Pomology Club members. “It will be a Pomology Club project. Future members will have the responsibility of maintaining the plot. The upkeep (volume of work) is not that difficult. The plot has to look nice to attract people,” claimed Schloupt. Plans are underway for a commemorative plaque.

If you have ever wondered what a cranberry or kiwifruit looks like, plan a trip to the new Cornell fruit demonstration plot. You’re sure to have a “grape” day!
In the summer of 1987, the "garbage barge," as it was christened by the news media, travelled for three months and was rejected by six countries before finding refuge in a New York City incinerator. Carrying more than 2,000 tons of trash, that privately chartered barge became a symbol of New York state's burgeoning waste disposal problem.

"It's a problem that's finally beginning to dawn on the average citizen," said Prof. Richard E. Schuler, director of Cornell University's new Waste Management Institute. "And the problem is only going to get bigger," he said.

Schuler's goal is to actively research the different solutions to this waste management dilemma. The professor of economics and civil and environmental engineering is the head of a new program created by New York state legislation and funded by a court settlement against the Exxon Corporation. The Waste Management Institute was created in August 1987 and currently has four staff members.

What the Exxon Corporation has to do with is a question that produced an interesting answer. "The whole story is a tangled tale," said Kathi Mestayer, Research Coordinator for the Institute. According to Mestayer, several years ago the Exxon Corporation was brought to court. "The judgement was that Exxon had overcharged petroleum consumers," Mestayer said. "Exxon was ordered to return millions of dollars to every state ... on the order of $70 million to New York. It was sort of a nationwide reimbursement of an overcharge," she said.

The money from Exxon was then distributed to state legislatures with the major criterion that any program funded by the money had to be energy-related. Cornell received $5 million to start the New York State Solid Waste Combustion Institute.

Originally, faculty from the College of Agriculture and Life Sciences had proposed a center focusing on methane recovery from decomposition of agricultural wastes. State agencies, however, changed it to combustion.

Combustion research—the incineration of waste, what is produced and where it goes—was the initial focus of the state program, but, as Schuler said, the Institute has a much broader agenda.

"Combustion may be important to waste reduction, but there is no panacea," Schuler said. "It's important to look at all the alternatives of waste reduction and do a sensible mix and match. We're trying to take a broader look at waste reduction, recycling, combustion, and biological deterioration," he said.

Schuler said, "The state money must be focused primarily on combustion and combustion-related technologies." However, he said, "I urged the University to adopt a broader framework." Cornell's Waste Management Institute is now slated to explore research beyond trash incineration.

The Institute will work at two levels: as a University research program and an outreach program to communities, said Mestayer.

The Institute has three and a half years of funding available to it, but Mestayer said she wants it to continue far past 1991. "There's potential for industrial partnerships," she said. "Besides, I think our problems of waste disposal are going to continue for much longer than three and a half years. The problem is going to get a lot worse," she said, "and waste disposal a lot more expensive."

Waste management is already expensive. The owner of the infamous garbage barge said he lost hundreds of thousands of dollars in the fiasco. Research is expensive as well. The $5 million from the state should help. Mestayer said, "When you have a significant amount of research funding, then you can get the top people to apply their talents to your problem."

Application of talent will be necessary as New York tries every day to get rid of more garbage. However, "There are no easy solutions," Schuler said. "And that's difficult because Americans tend to think, 'Well, there's got to be some technological fix.' "

Waste disposal—waste like this must be recycled, burned or buried.
Urban extension programs restore community pride by helping residents renovate abandoned build-
ings and long-neglected tenements.

"Because the society and the nature of the economy have changed, extension programs have naturally broad-
ened and must continue to do so. This will require more and somewhat different collaborators than in the past be-
cause wider expertise is required than that of the disciplines found in the Colleges of Agriculture and Life Sciences
and Human Ecology." These observations are the basis for several recom-
mandations made to Cornell President
Frank H.T. Rhodes by Robben W. Flem-
ming, President Emeritus of the Univer-
sity of Michigan and chair of the Com-
mission on the Future of Cooperative
Extension.

Although the food and agriculture
system remains New York state's
largest industry, the state has shifted
from a primarily rural society to an ur-
ban one. In light of such societal
changes in the state as a whole, Rhod-
es appointed a commission to ex-
amine extension's historic mission,
propose priority programs for the future
and suggest an optimum working rela-
tionship of the Cooperative Extension
associations, Cornell University and
the State of New York. The Commis-
sion was composed of members from
several different backgrounds. State,
city and county government officials
worked with educational and agricultu-
ral leaders and representatives from
business and industry to help direct
Cooperative Extension into the future.

According to Cornell Cooperative Ex-
tension Director Lucinda Noble '54,
"The Commission, with such a variety
of experiences among its members,
provided an objective look at the exten-
sion system." Noble said that she and
other extension staff members were
available to the commission as "re-
source people," to respond to ques-
tions that arose about the program it-
self and how it is run. "The directors
were not, however, involved in making
the recommendations on the future of
Cooperative Extension," she said.

In the final report submitted to
Rhodes in March 1987, the Commis-
sion recommended an increased em-
phasis on urban problems to reflect
demographic and societal changes in
the state. Cooperative Extension, ac-
cording to the Commission, needs to
"Gear up to the 21st century." The
Commission suggested an expanded
role for extension programming, and
provided a list of several areas in which
extension could be utilized to assist the
urban areas of the state. Urban decay,
homelessness, job training and school
dropouts were listed as possible
projects for expanded extension efforts.

"If Cornell Cooperative Extension
adopts urban policies," asserts Flem-
mimg, "it will be on the forefront of
modernizing the extension concept
and making it applicable to the kinds
of problems we have in our society today."

This urban thrust concerns some
people in the agricultural industry
who have benefitted from Cooperative Ex-
tension's programs. Fear that the
change could detract from extension's
agricultural agenda has become apparent. There is also concern about the financial drain on rural counties supporting urban programs. Some farmers presently associated with extension are concerned that the new breed of county agents could be so busy catering to suburbanites that they would be unable to devote sufficient time to farmers' needs.

Rhodes assures members of the agricultural community that their extension services will not be lost in a redirection toward urban programs. "Extension still has a major commitment to maintaining a strong agricultural industry in New York state," Rhodes said. "However, extension has to change with the state's population and create a broader-based system that will allow for assistance to the growing urban populace," he said.

David Smith '64, Associate Director of Cornell Cooperative Extension, agrees with Rhodes that the new direction taken by extension will not detract from assistance given to the food and agriculture industry. "With the state's economy rooted in agriculture and the extensive research in Cornell's College of Agriculture and Life Sciences," Smith said, "Cooperative Extension will continue to be strongly linked with the betterment of the state's agriculture industry."

The Fleming Commission suggested that a university-wide extension effort be coordinated among Cornell's schools and colleges. "By tapping into the expertise of the University's private colleges, a broader base of knowledge can be applied to the problems facing the rural and urban residents of the state," according to Fleming. The Commission recommends that an extension function be part of Provost Robert Barker's jurisdiction. Teaching and research, the two other functions of the University, already fall under Barker's auspices, according to the report, and a more "broadly-based operation" could be effective if coordinated along with teaching and research in the Provost's office.

Noble said that there are "valid reasons" for such moves to centralize the extension function of the University. "Extension could reach more people with an expanded resource base of the endowed colleges," she said.

Noble called the report a "good thing," and said that Cooperative Extension programs are already headed in the direction outlined by the commission.

"Any changes in programming will come about slowly," she said. "People tend to fear change; they are not always sure change will be good." She said that the report is not a blueprint to be followed exactly, but rather a suggestive document to be considered and discussed.

"The recommendations made by the Fleming Commission provide a good base from which to move forward," said Smith. The ideas are sound and, if implemented, will allow Cooperative Extension and the University to better utilize their collective resources to address the needs of New York's diverse rural and urban populations as we move into the 21st century.

by Amy J. Palladino '89

Cooperative Extension will continue to keep the rural population up to date.

These urban gardens are valuable for teaching youngsters the joys of plants.
GROWING IDEAS

by Geoffrey R. Goldberg '89

Small, family-owned commercial farms have fallen on hard times during the past few years. Remedies such as government price fixing and surplus purchasing have not significantly lifted the economic burden of competition with huge, efficient corporate farms. Farmers also find themselves competing increasingly with one another. As a result, many of them are looking beyond traditional farming to fill the gap between their farm incomes and the income necessary to survive.

But just what does "beyond traditional farming" mean? It means "farming alternatives," small agricultural businesses that supplement or replace the farmer's original source of income.

Pam Connett is a farmer who has tried farming alternatives and succeeded. She was once part-owner of a farm in Groton, New York, which grew organic vegetables and herbs. But she shared the farm with so many other people that her share of the profits was low. Her farm also faced stiff competition from a number of others in the same field. The Farmer's Market in Ithaca had grown rapidly, from its modest start with ten vendors to its present 150. For her, it was pull ahead or sink.

"I needed something exciting," she said, "something to draw people." So she left the farm in Groton and bought one in Newfield. There she created Butternut Canning, where in addition to selling organic herbs and vegetables, she cans her own pickles and relishes, mustards, pesto (a basil sauce), chutney and herb vinegars.

"I work a lot harder now," Connett said, "but I earn a lot more." Any herbs that don't sell can be used in her vinegars. "It's a great way to get rid of surplus produce." Herb vinegars are one of the most profitable products she sells. "I expect to sell about 20,000 bottles this year," she said, and added that her biggest problem is keeping up with demand.

Connett said that in order to get started, it is best to speak with other farmers who have succeeded with alternative agriculture, or to go to Cooperative Extension's Farming Alternatives Project.

The year-old Farming Alternatives Project researches both the needs of state farmers and the feasible alternatives for them. A recent survey by Nancy Grudens Schuck, the project's education director, and her colleagues discovered more than 700 alternative rural enterprises like Connett's that have been developed over the past five years.

The project tries to find enterprises to suit each individual case. It helps desperate farmers to avoid jumping into a plan that might not be right for them.

The variety of possible alternatives is immense. Grudens Schuck described some of the more fascinating projects undertaken: a dairy with a bed and breakfast inn, one with a petting zoo, and a swine farm that grows tours and operates a gift shop and restaurant on the premises. One enterprising dairy farmer uses his farm home as a ski lodge in the winter and a farm vacation spot in the summer. On one choose-and-cut Christmas tree farm, the owners give hay rides, sell hot chocolate and have beef cattle.

The project's survey found several problems people may face in starting alternative enterprises. They include assessment of wholesale and retail consumer demand, the decision of where to sell and how to maintain markets or customers, and the successful promotion of a product. The project is prepared to deal with all these difficulties.

The Farming Alternatives Project has been around for about a year, and its growing popularity reflects the trend towards alternative agriculture. With incentives like Pam Connett's success, and the assistance available through the Farming Alternatives Project, more and more small farmers are looking to the "new frontier" of agriculture.
Levin to Head Environmental Research

Ecologist Simon A. Levin will serve as director of Cornell's Center for Environmental Research for five years. He replaces Neil Orloff, a professor of environmental engineering who is currently on a one-year sabbatical with the Los Angeles law firm of Irell and Manella.

The Center for Environmental Research ties together environment-related programs at Cornell, including the Ecosystems Research Center, the Environmental Law and Policy Program, the Water Resources Research Institute and the Cornell Laboratory for Environmental Applications of Remote Sensing (CLEARs).

A specialist in population and community biology and in the applications of mathematics to biology, Levin is the Charles A. Alexander Professor of Biological Sciences and is a professor of applied mathematics and ecology. He joined the Cornell staff in 1965 as an assistant professor and was chairman of the Section of Ecology and Systematics from 1974 to 1979.

Levin is managing editor of the Journal of Mathematical Biology and of the series Biomathematics and Lecture Notes in Biomathematics. He is also a member of the Commission on Life Sciences and the Board on Basic Biology of the National Research Council.

Constas Receives Education Award

Mark A. Constas, a postdoctoral fellow, is the recipient of the Department of Education's 1987 Julian E. and Veta Butterworth Fund Award for Dissertation Research. The award, which includes a $1,000 cash prize, recognizes the author of "the dissertation with the greatest theoretical and practical import."

Constas, who earned his doctorate in educational psychology from Cornell in August, displayed findings in his dissertation, "The Effect of Knowledge Competencies and Metacognitive Factors on the Clinical Skills of Veterinary Medical Students," during a conference held on August 3-7 in Dalian, China.

Enology Professor Joins Staff

Thomas Henick-Kling, an assistant professor of enology, has joined the Department of Food Science and Technology of the New York State Agricultural Experiment Station in Geneva.

His research will cover an examination of enological practices that affect the quality of wines made from New York grapes. Dr. Henick-Kling will also collaborate with Cornell viticulturists to determine the effect of new cultivars and viticultural practices on the flavor of wines. His research has centered on the control of malolactic fermentation in wine, a secondary bacterial fermentation which reduces wine's acidity while modifying flavor.

Before joining the Cornell staff, Dr. Henick-Kling worked as a research assistant in wine microbiology at the Australian Wine Research Institute and as a research assistant at Oregon State University.

Geneva Communicator Named

John A. Williams has been named to head the publications and public relations unit for Cornell University's N.Y. State Agricultural Experiment Station in Geneva.

Williams will be in charge of the printed and audiovisual communications that are directed to growers, the academic community and the public. The Station has evolved into a horticultural research institute that conducts research involving the production, protection and processing of fruits and vegetables.

Williams acted as editor/publisher of a weekly newspaper in Albion, N.Y. before joining Gannett Rochester Newspapers. He held numerous editorial posts, including managing editor of a 65,000-circulation weekly newspaper, while working for the Eastman Kodak Company in Rochester. He ended his Kodak career in 1986 as Senior Editor of Corporate Communications.

Williams worked as secretary for the Rochester Press-Radio Club for 12 years. In the mid-1970s, he handled press-liaison tasks for President Gerald Ford's 'Commission on Olympic Sports' in Washington, D.C. as aide to former Kodak Board Chairman Gerald B. Zornow, head of the Commission. For two seasons, Williams provided color commentary on WHAM Radio's play-by-play coverage of the AHL Rochester Amerks.
Dr. Robert Lamb settled in his chair.
"You’ve got to remember," he said, "apple breeding is a very slow endeavor." But to Lamb, and the other researchers at the New York State Agricultural Research Station in Geneva, N.Y., a long time is taken for granted when you improve on nature. At the station, researchers are constantly developing new varieties of apples that are more disease-resistant, easier to harvest, and better tasting than those provided by Mother Nature.

One of the most challenging tasks the researchers at Geneva face is making apple crops more disease and pest resistant. "We’re trying to find ways of reducing pesticide use," said Dr. Robert Plane, director of the station. "Agriculture is the number one industry in New York, and pesticides are a problem in populated areas." An alternative to pesticides is even more important in a state with a high population density, such as New York. At Geneva, an alternative to pesticides is in the works.

Researchers at Geneva use one of the world’s largest collections of germplasm (genetic material) to develop new apple varieties that are more resistant to pests and disease than existing ones. Some of this beneficial genetic material comes from unlikely sources: "that you would never think of eating"—like crab apples. "What good is a wild apple?" joked Dr. Plane. At Geneva, the answer is "very good."

Besides making apples more disease- and pest-resistant, researchers at Geneva also develop varieties of apples which are better tasting than existing ones, even after processing. "We try to breed an apple that will process without losing flavor," said Dr. Plane. "We have a blind taste panel, with three dishes of applesauce." In this "trial" test, only the best apple wins—and often, the winning apple is a variety produced by the Geneva station.

Developing any new apple variety is a time consuming, difficult project. According to Dr. Lamb, it takes "four or five of us, working from 10 days to 2 weeks" to cross polinate 12,000 to 20,000 plants by hand. The resulting seeds are grown in a greenhouse, where they are soon inoculated with the apple scab fungus. This disease kills about 50 to 60 percent of the plants. The remaining seedlings are inoculated with cedar apple rust and fireblight, with each inoculation killing half of the seedlings. By the end of the testing, only 2000 to 3000 seedlings are planted. It then takes from five to ten years for the plantings to bear fruit. And, said Dr. Lamb, "If one out of 100 of the trees looks promising, we’re doing pretty well."

One variety that survived the pests, the disease, and the taste tests is the Empire apple—probably the station’s greatest success in this area. A hybrid of Mackintosh and Red Delicious apples, the Empire is often considered more tasty than either of its parents. The development of the Empire was the same as for any other apple. But what sets the Empire apart from other apples developed at the station is that the Empire was not only a scientific breakthrough but also a commercial success.

Breeding this apple and convincing growers to plant it was not easy. With thousands of cross-breeding, years of testing and nearly a decade of waiting before the trees bore fruit, it is no surprise that the development of the apple took a long time. But what is surprising is how long a time. The Empire apple seed was born in 1945. Dr. Lamb, who came to Geneva in 1948, said that 5,000 Mackintosh seedlings were cross-pollinated with the Red Delicious variety. The trees finally fruited in 1954—apples are among the slowest trees to come into fruit. The trees were cared for, the fruit was tested and refined and finally, in 1966, introduced to the market under the name "Empire"—21 years after research started.

And the Empire has only recently become widely accepted. So, all in all, the Empire apple needed about 40 years to come to its (excuse the pun) fruition. Consider all that has happened in the last forty years, and the development of the Empire seems much longer, like an ordeal requiring infinite patience between the uncertain beginnings of a project and its final success. Surprisingly, Dr. Lamb doesn’t seem to think patience enters into it. From a researcher’s point of view, however, this attitude is not surprising in the least.

It is easy for us to think of the development of the Empire apple as a series of events: 1945, seed born. 1954, trees fruit. 1966, apple introduced to market. But for Dr. Lamb and the other researchers at the Geneva station, countless hours of work went on between those events. Researchers do not mark days off a calendar, waiting for the trees to fruit, or the introduction of the apple into the market. Because every year the Geneva station grows thousands of seedlings, tends to those grown last year, and waits for the trees planted years ago to fruit. For them, this research is as important as their apples are delicious.

by K. J. Bissett ’89
Stepping from Present to Past
ABOUT THIS ISSUE

This issue steps into the present and takes a look at what is happening at Cornell. We'll read about how one professor makes the art of accounting enjoyable. We'll look at the intricacies of the farm crisis and the choices people are facing. We will then step into the past and examine how the Countryman has grown, how seniors are still the same, and how traditions have changed. We hope you will come along; read and enjoy.

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Accounting:
One on One

"I had a real fear of public speaking, and my first day on the job they put me in front of 200 people with a microphone around my neck. I thought 'Oh gosh, what have I done?' But it was too late," Professor Marge Hubbert recalled.

Fortunately, Hubbert, who teaches financial and managerial accounting, two of the most popular courses in the Department of Agricultural Economics, was able to overcome her fear soon after she began teaching managerial accounting in the fall of 1983.

Born and raised in the Niagara Falls and Buffalo, New York area, Hubbert moved to Ithaca when her husband Bob finished school and got a job at Morse Industrial. Her son Rob was nine when she decided to return to college to get an accounting degree.

"I looked at Cornell, but the University didn't offer an accounting program. So instead I commuted to S.U.N.Y. Binghamton, which was a 55 mile trip each way," Hubbert said. While attending school, she also worked for two years full time in a public accounting firm, doing auditing towards her CPA license experience requirement.

In 1983, she finally completed her MBA, received her CPA license, and began teaching at Cornell. "I liked school and being around the students, and I was ready to leave auditing," Hubbert said. "My only concern was that I had had only a practical background and Cornell was a research institution; I didn't know if we would match. Luckily the courses were designed to instruct the applied and practical applications. The match was a success," she said.

"Since I had just finished school myself, the experience and pressure of being a student was very fresh in my mind," Hubbert said. "When one goes back to school as an adult, one doesn't perceive a big gap between the students and the professors. I have tried to make my students feel the same way, regardless of their age," she smiled.

What Hubbert prides herself on, and what her students rave about, is the more personal level that she teaches on. "I try to keep everything on a more informal and more comfortable level," Hubbert said. "I always let the students know that I have the time for them to come talk to me," she said.

In a class of 270 in the fall for managerial accounting and 650 in the spring for financial accounting, keeping in touch with the students is not easy. "Professor Hubbert is the most accessible teacher I have," Keith Donovan '89 said. "I know that if I have any questions or problems I just have to stop by her office and she'll make time for me. That's very important in a huge school like Cornell," Donovan said.

Not only is Hubbert's door open to students, but she also makes time to teach beyond the lectures. "Since the lectures are so impersonal, I always teach two labs (consisting of about 30 students each) so I can see faces, learn some names, hear questions, and get feedback. If my lab is lost, chances are that the rest of the class is lost too," she said.

In a further attempt to make her classroom smaller and more personal, Hubbert has gone to teaching two lectures a day, as the classes have grown. She attributes their rise in popularity to non-business majors looking for a few accounting courses, but students attribute it to her personality. "I took financial accounting because I heard that the professor was down-to-earth. I could relax in her class; she wasn't talking at me, she was talking to me," said Alison Campbell '89 a student in the College of Human Ecology.

Another aspect of teaching Hubbert really enjoys is her staff of teaching assistants and graders. "They become like a small class. "We become very close and we keep in touch even after they graduate," she said.

The T.A.'s agreed. Brad Lustig '88, a teaching assistant in managerial accounting after being a grader for financial accounting, said "Marge is extremely approachable, and very concerned about her students. She sees that everyone gets something out of the course, not just the smart ones," Lustig said.

Hubbert keeps abreast of new issues in accounting through her membership in professional associations such as the National Association of Accountants and the American Institute of CPA's. Her personal interest lies in accounting systems for non-profit organizations, and she would like to one day teach a course in non-profit accounting.

In addition to teaching, Hubbert is currently building a house in Virgil, New York, so as to have easy access to the skiing at Greek Peak. "My husband and I decided to live by our recreation rather than our professions," she smiled. She is also interested in doing part-time photography, a hobby which she began while skiing in the west, but now takes very seriously. "Photography is going to be my third job—after parenting and teaching," she said. And in the meantime her door remains open for any students who wish to use it.

Professor Marge Hubbert takes time not only to teach accounting but to get to know her students as well.

by Izabella Rudzki '89
Breaking Open a Giant Piggy Bank

by Alexander S. Chisholm '89

Dean David Call '54 has a piggy bank filled with more than 10,000,000 pennies. Each year he takes those pennies and, through careful fiscal planning and budgeting, divides them up and gives a share to each department and section in the College of Agriculture and Life Sciences.

University and college spending—How is it planned? How is it justified? Who makes the decisions? To a layman, the financial structure of Cornell, or any other major American university, may appear to be an elaborate, intricate and sometimes impassable maze of rules and regulations concerning the allocation of tuition, state funding, donations and income from endowments. Even to the experts like Call and the Statutory College’s Associate Director of Finance John Hartnett, the ways in which funds are disbursed take significant planning over a long period of time and are sometimes quite involved.

As dean of the College of Agriculture and Life Sciences, Call’s major duties consist of determining the way in which all financial resources are spent, the amount by which tuition will increase for ag students, and the needs for new programs, and the amount of money he expects to receive during the year.

The annual fiscal planning process begins over twelve months before the money being budgeted is going to be spent. When Call establishes the budget for the College, he looks at the commitments he has already made to faculty and students, the need for new programs, and the amount of money he expects to receive during the year.

According to Hartnett, “We have to know what our ‘givens’ are.” Fiscal planning is a complicated task when funding is being directed from many sources to many uses. This is why long range planning is one of the principal determinants in the allocation of funds to any department or section in the College.
"The College is like a big ocean tanker. You cannot change the direction of its course very rapidly," Call said. "You need to look at what changes you can make over short periods of time in order to move the ship slightly in a different direction."

The money to fuel the ship, the College, comes from many sources. The College operates under an annual budget of approximately one hundred million dollars. That may sound like a large amount of money, but according to Call, it is not quite enough to continue meeting expenses and developing programs.

The term "statutory" is assigned to the College of Agriculture and Life Sciences, the College of Veterinary Medicine, the College of Human Ecology, and the School of Industrial and Labor Relations. The State University of New York has a "contract" with Cornell University to manage these four units as part of the University's structure. This contract was authorized by a New York state statute, thus the name "statutory."

Of the $100,000,000 that pays for salaries, department costs and research, teaching, extension, administrative expenses, approximately 50 per cent is provided to the College by New York state and 50 per cent is provided from a wide variety of other sources. Of the total amount under which the College operates each year, 65 per cent of the money received goes to pay salaries for faculty, staff, and others. "Because of the way things are structured, when a faculty position is created, we are making a thirty- to forty-year commitment to that department through the creation of that position," Call said. "We have a responsibility to the people who work for us as well as to the students who now study or expect to study here.

"We cannot say that we offer a program in food science and then eliminate the faculty positions because we need to spend money in other areas," Call said to emphasize the commitment made to students and staff.

Call stressed the moderate annual changes that are made in the 450-member faculty of the college. "Take a look at the Department of Communication—ten years ago it was very different. Over the past decade, we have made minor adjustments each year to bring us to where we are today," he said. "We have to recognize the large amount of inertia in our system and make decisions to effect change on the margins of our programs," Call added.

"On the average, only 10 to 15 positions of the approximately 450-member faculty will be changed in one year," he said.

Other factors exist which may change the way by which "inertia" affects the planning process. "One of the challenging things is that we may be seeing statutory constraints," Hartnett said. "To maintain one program, we have to watch not only the state budgeting process, but also the expected revenues generated from tuition, research overhead, federal appropriation, grants, and contracts. From where the resources will come and how we will cover the cost in the long run are continuing concerns," he added.

Each spring, departments and sections submit budget requests for the following year to Call. The dean and directors then review each unit's needs and proposed programs. In addition to these budget requests, Call must also look at priority projects needed for the effective running and administration of the college.

A project on which Call has been working for the past several years is the computer automation of Mann Library's catalog system. Call emphasized the importance of this program to the ag college. "We have to keep up with the advances in university programming." Call said. Last year, Call asked that the state appropriation include the library automation plan in its budget allocation for the College in an effort to prevent an increase in tuition. The request was not funded. Call asked the state for the money again this year. If the state rejects Call's proposal this year, he will have no other choice but to recommend an increase in tuition to cover the cost of the automation plan and to provide faculty, staff and students with state of the art library research capabilities. "It is something that must be done," Call said.

Computers have long been another of Call's priorities because he feels they are an important part of the College's educational resources. Through the use of his discretionary fund, he has allocated a tremendous amount of money for the establishment of several facilities in Mann Library, Riley-Robb Hall and Warren Hall.

When the money runs out, Call must look to other sources of funding for needed or desired programs. Call, Hartnett, and the financial planning staff continually analyze the possibilities of obtaining funds from many sources. The funds received from New York state, Cornell University, corporations, endowments, and private contributors are very important and are strictly regulated. Policies exist which prohibit alternative uses of certain funds to protect programs already in existence and those in the planning stages.

The budgeting process is a long and elaborate process that takes many months of refining before administrators know exactly how much money they will receive for the following year. One might think that when they break open the piggy bank each year, money goes all over the place. On the contrary, careful planning and budgeting determines what will "make or break the bank" from year to year.
Beebe Lake, which had earned the nickname Beebe Marsh, can once again be justifiably called a lake. The 150-year-old man-made lake had filled in to form a swamp, but Cornell Plantations is restoring Beebe to its original grandeur, according to Robert E. Cook, director of the Plantations.

The lake, originally formed by Ezra Beebe to supply power to Colonel Jeremiah Beebe's Ithaca mills, was well on its way to becoming a forest. "We were seeing the inevitable progression of exchange that occurs between high ground and lowlands," said Cook. "That change is called succession," he said. Beebe's swamp-like state upset many people who remembered aquatic activities and the serene beauty of the lake that was.

In the past, Cornellians enjoyed ice hockey, ice skating, toboggan sliding, swimming, canoeing and aquatic carnivals on and in the lake, but in the last few years the lake had become a playground only for ducks, herons and other marshland animals. Many people expressed their displeasure with Beebe Marsh, and the University investigated into cleaning up the mess.

It was decided the best option was to expand the shoreline with the dredged material, making the lake smaller but deeper and cleaner. "But the cost would still be more than a million dollars for a facility whose importance to the University was perceived to be entirely aesthetic. A marsh wouldn't cost anything," said Cook.

A group of alumni wishing to remain anonymous pledged $500,000 to the restoration of Beebe Lake on the condition that the University would raise funds to match this gift to complete the project. The University accepted, and Beebe was drained to make way for earth-moving equipment.

The lake was dredged in July of 1986, and new shorelines were created. With this phase of restoration completed, Cornell Plantations began planning Phase II which would include site improvements, landscaping and general beautification. "We held a public meeting that brought together the major parties interested in the future of the lake: athletics, the Outing Club, facilities maintenance, the Plantations, alumni affairs, public safety and the residents of Forest Home," said Cook. "Everyone wished to see the lake and surrounding landscapes remain as natural as possible. Suggestions included skating, canoeing, picnicking, jogging, cross-country skiing and nature trails," he said.

With these guidelines in mind, Cornell Plantations hired the landscape/engineering firm of Clarke and Rapuano, Inc. of New York City to design the Beebe Lake masterplan. The plan includes an alumni/admissions center at the western end which will form a new gateway to Cornell, according to Cook. An informal picnic area is planned on the shore below Helen Newman Hall. "This area might be ideal for winter skating," said Cook.

Trails surrounding the lake will be upgraded, and lighting will be added to the major pathways. A new jogging trail will be constructed around the upper slopes, and a system of nature trails will provide access to the shoreline, wildlife sanctuary and scenic overlook sites.

The lake will have educational, as well as aesthetic, value, said Cook. "Landscape development and plantings will emphasize native material established to enhance the overall educational value of Beebe for academic classes in botany, ecology, horticulture and natural resources," said Cook. Along the southeastern shore, an aquatic collection with a boardwalk, called the Marsh, will be planted. The large island will be a wildlife sanctuary including native wildlife plantings.

The use and enjoyment of the Beebe Lake area was originally the vision of Colonel Henry W. Sackett, whose bequests helped route a system of trails along the Cornell gorges and permitted the first dredging of Beebe, said Cook. Sackett is honored by a bronze plaque on the arch bridge at the eastern end of Beebe which reads: "The Beebe Lake Trail and this bridge were provided by a bequest which Henry Woodward Sackett of the Class of 1875 made to Cornell University for the benefit of lovers of woodland beauty."

Beebe Lake is back and Cornellians of all ages rejoice. The lake, once again, is a lake.

by Robin M. Andrew '88
MAKING PLANS FOR MANN

Flipping to the next page of a well-worn issue of *Time* magazine, you sigh contentedly and nestle more deeply into the plush, burgundy cushions of your favorite library reading chair. Across the softly lit, carpeted room, a friend busily works at a spacious, private study carrel, surrounded on three sides by a tangled network of notecards, looseleaf papers and reference sources. Meanwhile, in the glass-walled, soundproof room across the hall, a group of young adults is engaged in what looks like a rousing debate over an article written in the local paper. Unable to read their lips, you glance at the computer monitor above the doorway which indicates that the library is closing in an hour, and then turn back to the magazine in your lap, thankful that you decided to visit the library that day.

Sound too good to be true? Jan Olsen, Director of Mann Library, thinks not. In fact, if the New York State Assembly approves, Cornell University may soon receive funding to renovate completely the interior of Mann Library.

In the meantime, Edward R. Ostrander, associate professor in the Department of Design and Environmental Analysis, has asked the nine members of his class—Programming Methods in Design—to determine the best way to refurbish each of seven sections in the library: the book stacks, the first floor study rooms, the reference room, the glass-enclosed group study area, the computer and mini-conference facilities, the periodical room and the reserve desk area.

By interviewing and surveying student and faculty library users, as well as staff members, the class will attempt to define what the user-body likes and dislikes about the library, Ostrander said. If the library receives funding, Ostrander expects that the administration will take into serious consideration the conclusions reached by his class about specific changes which library users desire.

According to Olsen, who originally asked for Ostrander’s help during the summer of 1987, a well-executed study will be an invaluable resource.

“Knowing specifically what works and what doesn’t work from the perspective of the library user will help me understand more thoroughly what types of renovation are necessary,” Olsen said. Class members have already made some preliminary observations of the behavioral patterns of Mann Library patrons, Ostrander said.

“We’ve noticed, for example, that students often avoid the slanted tables in the McKay and South reading rooms on the first floor. Also, when students choose to sit in the leather chairs in the McKay room, they usually drag over another chair to use as a foot rest,” Ostrander said.

According to Ostrander, the class will use these types of observations to determine what functions of Mann Library are important. Should the library be a quiet place for individual study, for example, or should more space be reserved for group-oriented work, is one question that the class will consider.

In addition, class members hope to learn why patrons come to Mann Library and what they wish to accomplish once they are there.

“We hope to figure out what type of study tasks—readings, problem sets, papers—cause people to use the library in the first place and why they choose to complete this task in a library-type environment rather than in a dorm room or apartment,” Ostrander said. The class will also attempt to determine what role the library will play in the future.

“Right now, Mann Library, which was built and furnished for students of the 1950s, is trying very hard to cater to the users of the 1980s. Who knows what the library user of 2010 will be like?” Olsen said.

By then, every dorm on campus may have computers hooked up to a computerized version of the library’s book collection, thereby making daily trips to Mann unnecessary and obsolete, Ostrander added.

After analyzing the information collected from interviews and short questionnaires, the class will submit their conclusions and recommendations about library renovation in a detailed report to the library administrators.

“If Mann receives funding, I know that this study will help us make the library more aesthetically pleasing, as well as physically, emotionally and intellectually hospitable,” Olsen said.

by Sunny E. Edmunds ’89
An estimated 40,000 to 45,000 mid-size farms in the United States will go out of business in 1988. With whom, specifically, does the problem lie? According to NY FarmNet director Dr. John Brake, it lies in farms of all sizes who are unable to service their debts.

Middle income and family owned farms are the hardest hit by the crisis. "It's a catch-22," said Associate Professor of Agricultural Economics David Kohl. Large farms can spread their costs over a wide range of financial strategies and turn over a lot of capital. Smaller farms allow their owners to keep part-time jobs. Kohl said there are 600,000 to 800,000 U.S. farms in these two categories, farms too large to allow other forms of income and too small to cover their costs.

The crisis began in the 1970s. Economic conditions then were tricky, according to Kohl, and many farmers misjudged them. Inflation was expected to continue, but ceased. Interest rates were expected to go down, but increased. Government price supports were expected to hold prices steady. Since the supports were directly correlated with total production, according to Brake, only large farms benefited.

Why do mid-size farms manage to accumulate enough debt to put them under? There are several reasons, said Brake. First, farms that started within the past 11 years had an initial debt they never managed to escape.

Some farms that were doing well during this period decided to expand and got caught in the same crunch as those that had just started up. Interest rates on loans increased and prices needed to finance those loans decreased. In addition, Brake pointed out that farmers have little choice when to expand. "When the farm next door goes up for sale, you've got to grab it or it's gone forever."

Other farms that were financially stable failed to anticipate the price drop. When they wanted to pay off their...
debts, the income just wasn't there.

Another cause, although less prominent than the others according to Brake, was speculation. Farmers bought large amounts of land and equipment under the assumption that with inflation, the purchases would be worth more than what they paid for them. When inflation ended, they were left "high and dry."

Kohl added emotion as another element of the problem. Many farms that were passed down from generation to generation or begun as hobbies hold deep sentimental value for their owners, who are extremely reluctant to let them go. Kohl said some farmers take two to three years to come to terms with the situation and sell out, but by that time it is often too late, and financial catastrophe results.

Age is another factor, Kohl said. Many of these farms are owned by people from 45 to 60 years old, too young to step out of the work force, but too old or unwilling to be retrained in another field.

While the crisis seems to be "leveling off," said Kohl, "there's a talent lag moving into the 1990s." Kohl said that at one time there were over 93,000 agriculture students in the United States, a figure now down to about 50,000.

Farmers struggling to get out of, or at least reduce their debt have several options open to them, said Brake. A common method is to "restructure" the debt. This involves changing the timetable on which debts are repaid. Brake said it could involve changing short-term debts to long-term or real estate debts, giving the farmer several extra years to pay.

Lenders and creditors themselves have shown some willingness to help, both for humanitarian reasons and to avoid foreclosures. Brake said some of the measures they have been taking include reducing interest rates to lower the actual amount of money the farmer needs to produce.

NY FarmNet's Dr. John Brake: family farms are the hardest hit.

Some creditors are writing off portions of the debt. When security values drop, some creditors write the debt down to the present value of the land, rather than the value when purchased. Help from creditors, however, is voluntary. While some are helping to relieve the farmers' burden, many are not.

Cornell University has created several organizations to help New York farmers deal with the crisis. The Farming Alternatives Project researches alternative forms of agriculture that can supplement or replace a farmer's present business.

This works well for farms not yet in financial trouble but want to get a firm foothold before hard times hit. It has been met with very limited success, however, with farms already deep in debt, those in most need of help. Brake attributes this to the farmer's inability to carry the risk of starting a new venture. Farms with a lot of debt can't afford to start a new form of business and if that business fails, it could spell disaster.

A more successful program is the NY FarmNet. This program centers on a toll free number farmers call if they need help. They speak with an operator who evaluates their needs and has a number of options open to deal with the farmer's problem. "In cases where farmers simply don't earn enough to put food on their tables," said Brake, "they are referred to local agencies such as the Department of Social Services or the food stamp program."

In other cases, the farmers are sent information packets designed to make them aware of the financial options available to them. More directly, the program hires extension specialists, lawyers and financial counselors to work on a one-to-one basis with the farmers.

What does the future hold? Kohl suggested that we are not seeing the decline of the family farm, rather, "the decline of the family farm as we know it." The emerging results of the farm crisis do not necessarily indicate a damaged agricultural institution, but rather a changed one. ☐
"It's the private dollar that allows us to maintain our edge of excellence," said the Director of Alumni Affairs and Development for the College of Agriculture and Life Sciences John Sterling '59. "And it's the students who know the importance of that dollar."

Sterling is talking about alumni fundraising or "development" as it is known at colleges and universities. The College's Development Office works with alumni and friends to finance a college education.Private donations result in more money for the College, and that is money into the education of CALS students in every field.

"The College now has about 126 named scholarship or award funds. That translates to about half a million dollars awarded to about 550 undergraduate and graduate students in the College," Sterling said. The scholarships and fellowships might be the most widely known form of alumni help students receive, but they are not the only form of help.

Alumni of the ag college have in past years given classrooms, trees, animals, laboratory equipment, and real estate to the College. In fiscal year 1986-87, more than $15 million in gifts from alumni, friends, corporations and others were donated to the College. Sterling said that particular total is a bit unusual, though, because nearly $4 million came from the E.V. Baker estate bequest alone.

How does the College solicit gifts, and to where do alumni write out their checks? Melanie Weymer is the Director of the Cornell Fund for the entire University, and she said there are three areas of giving but only one way of asking.

"Gifts go to the University in general or to the College in particular or to a specific scholarship, fellowship or award fund," Weymer said. The giving alumnus has the choice. If the University is targeted to receive the gift, Weymer said Cornell's priorities at that time decide the money's fate. If the check is written to the College, Sterling said it goes into the "dean's discretionary funds." If the alumnus wants a specific fund or area to receive the gift, he or she simply designates it as such.

Asking for funds only happens in one way, however. Weymer said, "We encourage people to give to people. Not people giving to institutions. Giving in general is a very personal thing. It borders on the emotional. So we try to encourage volunteers to approach alumni in as personal a way as possible."

"Solicitation can come to CALS alumni either from the Cornell Fund acting on behalf of the University or through our College," Sterling said. Gifts solicited by the College in special funds are generally designated funds. "We do not make a general solicitation to CALS alumni. The specific scholarships, fellowships, professorships, awards, etcetera which are generated for our College are often solicited by us for a specific fund," Sterling said.

The recent results of this kind of solicitation are satisfying. Private contributions have increased annually in the past five years. Last year, about $370,000 in total gifts were pledged or given to the newly formed Stanley Warren Teaching Endowment Fund. "For the past several years, we have had a much needed increase in private gifts from most sources," said Sterling.

Much of the praise for this financial round-up must go to the chair of the College Development Committee Jean Rowley '54. Sterling said Rowley's work is crucial to the College's fundraising success. Weymer also said Rowley's job is key: "There is a cardinal rule to fundraising. Whenever you do an effort—no matter what you do, no matter what the time frame is—you have the best possible volunteer chair you can. That will determine everything. Jean Rowley is excellent."

The College's development agenda includes further renovations to Mann Library and increasing the number of alumni who make gifts to the College. Last year more than 6,000 CALS alumni contributed, but Sterling said the College and its students need more alumni who can give support to a first-rate institution.

"With state funds becoming increasingly difficult to come by," Sterling said, "it takes the private dollar to bring about the excellence." Alumni gifts are integral to that excellence.
ERIC and Agricola. Are they a traditional Cornell twosome? Could they possibly be ‘aliens’ from another planet? No, ERIC and Agricola are the College of Agriculture and Life Sciences' computerized databases located in Mann Library. Cornell students, faculty, and alumni may access information on the computers free of charge.

Linda Stewart, on-line coordinator, is in charge of computer searching for Mann Library. She notes that there are several advantages associated with the new compact disk functioning computers. “The computer searches help people research complex topics at no cost. A subsidiary benefit is that it is educational for people to conduct their own searches.”

ERIC and Agricola’s databases, stored on compact disks, house descriptions of periodical articles, research reports, government documents, conference proceedings and some previously unpublished material. ERIC, produced by the Educational Resources Information Center through the U.S. Department of Education, consists of two subfiles: 1) a Resources in Education (RIE) file that covers unpublished documents and 2) the Current Index to Journals in Education (CIJE) that encompasses approximately 750 serial publications. Agricola is developed by the National Agricultural Library operating out of the U.S. Department of Agriculture.

A wide array of topics may be researched using the computers. Sample educational subjects that are represented in the ERIC data files are educational management, test measurement and evaluation and vocational education. Agricola users can access material in the areas of agriculture, food and nutrition, natural resources and applied biology.

According to Stewart, new search software for Mann Library had to pass certain requirements in order to be accepted. “We wanted to find software that was easy enough for people to use with a manual, so we evaluated several different companies.” Products were tested by the library staff using a list of criteria: the software had to be able to search several concepts at once and it had to contain easy-to-follow instructions (e.g. “Press F1 to continue”). Agricola and ERIC on compact disk became available to the Cornell community in April 1987.

A well-prepared search strategy is the best way to access relevant information. Mann Library has devised a four-part plan to aid prospective users. First, one should clearly define the topic and the major concepts. ERIC has its own thesaurus that is an index to major headings. Agricola users should think of synonyms or words that an author might have used in the title (e.g. a common or scientific name of a plant or animal). Second, one should think of logical words to connect the concepts such as “and, or, not.” After the appropriate words are entered, the computer lists the number of articles that it located relating to one’s request. The final step is obtaining a printout of article descriptions.

Ellen Phillips ’88, an education major, is doing two papers on a related topic, test anxiety. She cites ERIC’s efficiency. “ERIC is God’s gift to education students. In half an hour, the computer listed 43 sources.” Jim Harper, an education grad student, concurs. “I think that this particular system is very good because it allows you to do a lot more creative searching.”

ERIC’s effectiveness was clearly demonstrated in a study conducted by Stewart and Professor Dean Sutphin from the Department of Education in April 1987. Students in Sutphin’s Microcomputers in Education course were required to evaluate a microcomputer-based product. They compared the printed ERIC index with the ERIC compact disks and it was determined that students found more relevant references using the compact disk. The system also required less time to locate them.

Several misconceptions have developed concerning the use of the computers, according to Stewart. “People think that it is our card catalog so they type in the title of a book. In fact, all of the references are not necessarily available at Cornell. People also believe that the databases contain the entire articles, while they actually list only descriptions of the articles.”

There are three ways to familiarize oneself with the ERIC and Agricola systems. A prospective user can either read a search manual and work through a tutorial, attend a “Searching Bibliographic Databases” workshop at the Mann Microcomputer Center or ask for assistance at the Mann reference desk.

ERIC and Agricola may not be Cornell’s most traditional steady companions or ‘aliens’ from a faraway land, but these computer systems are becoming more visible as useful tools on the Cornell campus.

Janyce Melissa Wiener ’88
The Cornell Countryman is Read and Discussed by the Men Who Lead in Agriculture, Farmers' Institute Workers and Experiment Station Men/1100 Men Have Gone Out from the Agriculture College of Cornell University/These Men Are Not Only BUYERS but BUYERMAKERS/They Influence Many Thousand Men by Word and Example," proclaimed the opening page of the first issue of the Cornell Countryman, published in December, 1903. From enthusiastic calls for advertising like this one, to controversial articles like "Would You Marry a Farmer?" (printed in the May, 1951 issue) to the ever-reliable reports on agricultural research and college developments, the Countryman has remained an accurate record of what is happening in the College of Agriculture and Life Sciences for 85 years.

The magazine has gone from a circulation rate of 2,000 copies a month at a production cost of $90 to one of 6,700 copies that cost $2,600 to produce. The Countryman also holds many distinctions for Cornell journalism: it is the University's longest-continuing magazine, the oldest surviving agricultural publication of any college in the nation, and the only agricultural journal in the Ivy League. For these reasons, it is invaluable to those interested in the history of the University and the College, the student life of Cornellians in the past and present, and the development of college magazines.

The Countryman started out as much more of an agricultural research journal than it is today. Its articles were written mostly by members of the College faculty and alumni; the first issue featured an article by Liberty Hyde Bailey, then the director of the College of Agriculture. The Countryman's earliest mastheads contain the names of some of the most famous and respected Cornellians: Martha Van Rensselaer, George Warren, Anna Comstock, and Albert R. Mann. Warren was the magazine's first editor and was responsible for the direction the magazine took. In his first editorial, he wrote: "The results of scientific investigations and general agricultural news will be given prominence. Special attention will be given to news of former students."

Those areas are still covered by the Countryman today, though in less depth—the task was undoubtedly less staggering when there were only 35 faculty members and a few hundred students in the College, as there were in 1903. For example, the graduating class of 1905 consisted of 27 candidates for degrees, and they all had their photographs and biographies printed in the closing pages of the May, 1905 issue of the magazine. The practice of focusing on the College's graduates continued, but enrollment increased so dramatically that in 1909 the photographs were eliminated and soon after that the alumni section was reduced to short biographies of a few outstanding seniors.

The tremendous growth of the College has changed the focus of the Countryman somewhat, but there are certain facets of the magazine that will not change. One is the dedication of the staff to keeping the alumni informed of both campus and alumni news. Through the years, the section of the magazine devoted to alumni has varied in length, substance, and title. It sported "Former Students' Notes," "Alumni," and "Former Students," before becoming the "Countryman Capsules" as it remains today.

John Sterling '59, the director of Alumni Affairs and Development for the ag college, said that the Countryman is helpful in keeping alumni aware of what's happening on campus. "The Countryman keeps alumni oriented with student perspectives," he said. "The publications from the College give perspectives of the faculty, college, and alumni, rarely student views. And the Countryman delves into issues that are historical in nature or focus on subjects that alumni would not otherwise learn about."

The College's Alumni Association provides a free subscription of the Countryman with every membership to the organization.

Jane E. Hardy '53 has been faculty advisor to the Countryman since 1975. She emphasized the importance of alumni in publishing the Countryman. "We consider that a large number of our readership are alumni and we're concerned that alumni know what our students are doing," she said.

Although the basic mission of the Countryman has remained the same—
to keep alumni, faculty, and students informed of ag college news and people—the magazine has changed in many ways. Some of the changes are obvious, due to improvements in technology. The design has become increasingly sophisticated, the quality of the printing, photographs, and paper is better, and the process has become easier for the staff because of word processing and computerized typesetting.

The actual content of the articles published in the Countryman has been dictated by the interests and tastes of the particular authors and editors, which accounts for the variety of subjects over the years. From research reporting in the Countryman's early years, the magazine has gone in many different directions. The first innovation was the addition of a page entitled "A Journal of Country Life—Plant, Animal, Human," which consisted of personal essays and observations. The Countryman contained poetry reprinted from the Saturday Evening Post, until the staff considered the form unpopular and comics entered the magazine in the 1940s. Columns such as "Campus Chat," "Domecon Doings" (news from the College of Home Economics), "Cornell Foresters," and "Inquiring Countryman" (which asked timely questions of random students) were published through the 1950s. In the 1960s, Countryman articles took on more socially relevant issues. The January, 1968 copy featured a profile of activist Reverend Daniel Berrigan, S.J., an article called "Politics and Protest," and one concerning the food need in India. Likewise, the Countryman of the 1970s and 1980s often dealt with the primary interests of Cornell students, such as the environmental movement, service organizations, and the current political scene. "The Countryman reflects what people are thinking about, their world and local views, and how they're feeling about things," Hardy said.

The staffing and organization of the Countryman have gone through many changes since the small group of ag students came up with the idea of a magazine, sold advertising, and completed the first issue in 1903. The Countryman was published by a volunteer group of students from the Colleges of Agriculture and Human Ecology until 1963. For many years, there were elections held for the positions of editor and for the editorial and business staffs. As the competition from other campus publications increased, however, the staff of the Countryman declined. In 1963, the Department of Extension Teaching and Information (now Communication) assumed responsibility for the magazine (eliminating the need to sell advertising) and offered a course in its publication. Now the course, Print Media Laboratory, is a requirement for Communication majors in the Publications sequence.

"The course allows our students to get hands-on experience in the publishing field," Hardy said. "We're concerned that students know how the process works. We want to keep them up to date with the technology before they walk into an editor's office and have to deal with it." Students in the class staff the different positions needed to publish the magazine, from editing to layout, and undertake most of the legwork needed to get the magazine to its readers. This leads to more classroom independence than students usually have.

"There's quite a lot of autonomy in the course—the students make the decisions to solve the problems," Hardy said. "There's freedom to try things even if you don't know whether or not they'll work. There's also an interpersonal challenge, because students recognize that they have responsibility, and they'll usually take it and run with it. They don't just worry about their own paper but about the magazine as a whole."

The Cornell Countryman has been the voice of students in the College of Agriculture and Life Sciences for almost 85 years. The bound volumes in Mann Library are a resource for anyone fascinated by the diversity of the College's students, faculty, and alumni. Whether you want to know if coeds in the 1950s would marry a farmer (one article argued "No—It's Slavery"), what entomology researchers are up to, or what current student perspectives on life are, the Countryman has it all.

by Molly Clifford '88
Clearly, the passage of time and changes in society affect the structure of institutions, Cornell University being no exception. Nevertheless, the character of the University has remained the same over time, in the way that students from every generation face similar challenges.

Responding to these societal changes, Cornell has expanded its educational and social institutions, respectively. During the past century, the student population has increased significantly, from 6,000 in 1950 to 17,000 in 1988, creating the need for larger lectures and a greater number of university-owned dormitories and academic buildings. In the social sphere, our values and mores have certainly altered. As opposed to thirty years ago, both men and women students alike have the opportunity to reside in off-campus housing as well as in University-owned living quarters. Additionally, students are not required to receive the written consent of parents in order to maintain a car on campus, as they did in 1950. “The University has modified its role from that of in loco parentis [in place of parents] to that of an educator,” explained Sheila Vouderer Strauss ’64.

Despite these differences, some things always seem to stay the same. Students still suffer through long, cold winters, barely reaching the top of Libe Slope when the ice forms its grip. The Greek system plays as prominent a role in our lives today as it did thirty years ago (the number of fraternities and sororities has increased by only 15 percent). Not as obvious is a certain dimension of Cornell life that has been consistent over the years. It is called the “second semester senior syndrome”.

Cornellians from all generations have faced this syndrome at one time or another. Whether a graduate in the past few decades, or presently facing this most anticipated event, you are bound to confront one of the most frustrating and difficult tasks at Cornell: choosing courses for your final semester as an undergraduate.

As potential 1988 graduates, my friends and I agonized over which subjects to study in the spring. During the two-week registration period, we constantly questioned our desires, needs and motives. Should we take less strenuous classes and fall prey to “senior slump”, or do we pursue the more scholarly approach and enroll in complex courses, even though they may entail more work? “Who wants to wake up for a 9:05 class as a senior, even though I want to take a certain class?” asked Sherri Cohen ’88.

Cohen’s concerns apparently reflect those of many second semester seniors. “As freshmen, we didn’t get to choose our classes. Now I’m a senior, but my schedule doesn’t allow me to take all of the courses I’m interested in,” said Wendy Spivack ’88. And yet another problem which faces second semester seniors is revolving our classes around job and graduate school admissions interviews. Planning for long weekends and overnight stays does not permit enrolling in classes which meet on Monday and Friday. “I tried to arrange my schedule so that I only had classes on Tuesday, Wednesday and Thursday, but this task became impossible since the classes I’ve looked forward to taking are not offered at those times,” said Craig Fischman ’88, a medical school applicant.

Surprisingly so, Cornell seniors in the early 1900s faced the same problems as those in 1988. Even though the selection of courses was more limited than it is now and the number of requirements were greater, Cornellians were still confronted with “second semester senior syndrome,” but on a smaller scale. Consequently, the most well-liked subjects in 1900—semitic literature, modern European and English languages, history and Latin—do not have the same appeal to today’s students (in fact, many of these courses are not offered anymore).

Similarly, seniors in the 1950s and 1960s had an even more difficult task choosing from the wider range of courses. “My friends and I had a hard time deciding whether to take Rural Education, Genetics, Government or Home Economics,” said Sheila Vouderer Strass ’64. Strauss, who is an active Cornell alumna, explained that while the University’s philosophy has changed over the years, the variety and number of courses were just as extensive when she was a student. The only difference lies in which courses were most popular.

Today, second semester seniors are geared towards taking entrepreneurship and enterprise, introduction to wines and spirits, human sexuality and investment management.

A pattern seems to be emerging. Although Cornell changes with society and the passage of time, the things that remain the same are what make Cornell unique. As Alphonse Karr once said, “Plus ça change, plus c’est la même chose”: the more things change, the more they stay the same.

by Nina Fastenberg ’88
Pinning, the act of giving one's fraternity pin to his girlfriend, was once a very special and serious event on college campuses. Today, however, it has fallen by the wayside and is not recognized today as a formal tradition. In fact most college students today do not even realize that there were strong traditions behind the act of pinning.

"Pinning has been lost in this generation," said Kenneth Wing, '58, presently Associate Dean of the College of Agriculture and Life Sciences. Wing said that in the 50s and early 60s the environment in which students lived was much more structured and formal, and therefore, students tended to be more involved with tradition.

According to Wing, a fraternity pin was a treasured article. The brothers scrimped and saved in order to buy a pin for themselves. "Most people had gold pins, containing rubies, diamonds, or pearls, with a gold chain with block letters also made of rubies, diamonds, or pearls. They were expensive and very nice," said Wing.

"Every time a fraternity member wore a coat and tie, he had to wear his fraternity pin on the left shirt pocket. Members would check to make sure a brother was wearing his pin," said Wing. "The brothers were especially watchful of this when they knew a brother had a steady and was a candidate for pinning," said Wing.

"Once it was discovered that a brother had pinned his steady, two events took place. First, the fraternity brother was "tubbed"— dragged to the shower and soaked. Second, the woman was serenaded by the brothers in the house. The brother who pinned her went to the woman's house and brought her to the front door where she was presented with a bouquet of flow-
Oscar Vizcarra '79 is one of Cornell's exceptional graduates. You probably haven't heard his name, you may not even remember it in ten minutes. But Vizcarra should be remembered. He is the typical American Dream come true and the atypical Cornell student.

Vizcarra came to America with little more than a dream; a dream to make a living in America.

Vizcarra, 34, left Peru for America in 1969, when he was sixteen. He came with only a suitcase and the clothes on his back. He arrived in Miami and flew to New York City to live with friends of his mother.

Living in the South Bronx showed Vizcarra a different side of America than the television shows he used to watch. Here, not everyone was white, they didn't have a lot of money, and their hope was gone.

"I wanted to find a better way to live in America. I knew my only chance was education."

Vizcarra went to high school in the Bronx, and later, Westchester when the family he was with moved there. Vizcarra graduated in 1971 and then graduated from Westchester Community College two years later. By this time, he was fluent in English, something that had been a major problem for him.

In 1975, Vizcarra studied landscaping and agriculture at Delhi Agricultural and Technical College, where he met his future wife, Melinda. When he graduated in 1977, Melinda convinced Vizcarra to attend Cornell with her and further his agricultural training.

It was tough for Vizcarra, but his years of hard work and incredible determination prepared him well; he graduated from the College in 1979, married Melinda and was ready to work for a living.

"Leadership is the key."

Vizcarra and Melinda (who have three children now) manage the 300 acre Becker Farm, which has been in Melinda's family since 1894. The farm had been a cherry and apple farm, but they made it a pick-your-own farm where they grow many varieties of fruits and vegetables.

From April to late November, anyone can stop in and pick whatever fruits or vegetables are in season. Unlike most of the area's farms, children are not only welcome, they are encouraged to come. If they do not want to pick, there is a small petting zoo with goats, horses, cows, a lamb and several other animals. There are also hay rides on the weekends and tours during the week.

The farm is a family business, and anyone who works there for a summer becomes part of the family. Vizcarra is a stern boss, but he fools around as much as the workers. If someone can't stand the hard work, they're in trouble, because Vizcarra expects nothing but hard work.

He also leaves his workers to themselves; he shows them how to do a job and then lets them do it. It takes some respect on his part to do that, and this gets him respect in return.

"Leadership means to have a vision and let the people around you understand this vision, then let them manage alone."

His education, his hard work, and his love of farming are all very apparent when you get to know Vizcarra. He is proud of his Cornell diploma — it hangs on the wall in his office — and it seems that Cornell should be proud of him.

Oscar's dream came true — maybe he is a typical Cornellian; they are good at dealing with adversity. □

by Alex Barker '89
THE LEGALITIES OF LIQUOR

by K. J. Bissett '89

A student lounges lazily on the arts quad, his jacket bundled under his head, hands crossed across his chest, cap pulled over his eyes... and a case of beer by his side. Public Safety officers circle him, unsure of what to do. After a few minutes of discussion, they depart—leaving the obviously underage student, and his beer, undisturbed.

How did this student get away with this? A legal loophole, perhaps? Or maybe it wasn't really beer. Not at all. Any student at Cornell, or anywhere else in New York state, could carry around beer or any other alcoholic beverage without fear of arrest. He can even take the alcohol to his apartment and share a few beers with Public Safety without breaking any law, because New York state does not have a drinking age.

But if this student should happen to give a beer to his 19 year old roommate, he may face arrest. New York's only control over drinking by people less than 21 years old is a purchase age which prohibits anyone from giving alcohol to a minor, while making it perfectly legal for those under 21 to possess, and drink, alcohol. This unusual law has created headaches for colleges across the state and has, in fact, done little to discourage underage drinking.

At Cornell, underage drinking has gone on despite the law. The only change at Cornell since the rise in the purchase age has been an increase in alcohol-related problems. According to the May 7, 1987 edition of the Cornell Chronicle, the increased purchase age has been followed by a 12 percent rise in the number of students reporting physical injury as a result of drinking, and a 7 percent increase in students who reported being taken advantage of sexually. Moreover, the number of drinking students has not changed significantly since the law went into effect. As far as controlling underage drinking is concerned, the law has been ineffective.

Besides having no impact on underage drinking, the purchase law has been a problem to enforce. Assistant Director of Public Safety Lt. Randall Hausner '85 says that "It is difficult to locate the seller because drinking students are often unwilling to reveal their sources. The law creates some very interesting — even impossible — enforcement problems." Since students are not breaking the law simply by drinking, Public Safety has no way of finding out where the students got the liquor. If the students were drinking in public places, or breaking some other law, Public Safety would then have some leverage, some way of finding out who supplied those minors with alcohol.

Finding the drinkers is itself a problem. According to Hausner, students are fully protected by their fourth amendment rights against unreasonable search and seizure, even in campus housing. If a student creates a disturbance, then Public Safety can investigate. With this constraint, the only time Public Safety has a chance to stop underage drinking is after the damage is done. The implications of this constraint are staggering: Hausner estimates that about 80 percent of the crimes committed on campus are alcohol-related.

Saddled with a law Hausner describes as "impossible to enforce," and a student body able to procure alcohol easily and drink it legally, Cornell has adopted a different approach to the problem. The University's policy has been to de-emphasize alcohol use, by taking it out of events such as "Fun in the Sun" and the "Phi Psi 500," and putting an end to open fraternity parties. Hausner says that "Cornell is trying to create an environment where alcohol is not the centerpiece of student life." Rather than relying on force, Cornell is trying finesse.

Unfortunately, the strategy does not appear to be working. Cornell's attempts to ease alcohol off the campus scene have been met with resistance at every turn. Students still crowd Libe slope on the last day of spring semester for an afternoon of drinking, while "dry" events like Fun in the Sun draw a smaller crowd. While open fraternity parties are a thing of the past, the new invite-only parties still draw huge crowds. Cornell's policy has only antagonized students, who are then even more resistant to changes in the social life at the University. "We are losing the battle from a social standpoint," said Hausner. "You alienate yourself from the society you're supposed to be serving when you have to enforce an unpopular law." Given the students' resistance to policies that attempt to limit their alcohol use, and an unusual law that handcuffs Cornell's attempts to regulate this usage, Cornell will continue to face numerous obstacles when trying to enforce the 21 purchase age.
One looks like the rim of a steel playpen that could easily rock down Libe Slope. Another exemplifies ideal human characteristics. And a third is a twisted configuration resembling a harp.

While the expansive Cornell campus is typically known for its scenic gorges and waterfalls, its beauty and uniqueness can also be attributed to these and a number of other artistic works displayed around the campus.

The most curious art pieces surround the Herbert F. Johnson Museum of Art. One, an untitled work by New York City artist Anthony Weyhe, is a pyramidal sculpture composed of cedar poles that overlooks Libe Slope just south of the museum. Weyhe traveled to Cornell in 1974 to oversee the construction of his structure after going to Vermont to personally select the poles. According to Thomas Leavitt, director of the museum, Weyhe intended his sculpture to have a "finite life" and thus carefully selected the materials for his work, choosing those that "weather with time."

Situated next to Weyhe's piece is David Van Schlegelle's untitled sculpture made of stainless steel and aluminum. The head of Yale University's sculpture department, Van Schlegelle constructed the structure in 1970, the year he taught at Cornell. The piece exemplifies his interest in the "potential kinetic mobility of sculpture."

Albany based artist Dan Ben Shmuel specifically designed "Richard Evans, 2nd, Number III" in 1972 for its site in front of the museum's parking lot. The 22 by 48 foot painted steel sculpture is a blocky, bold piece that seems designed for a playground. "The bars are so tempting to climb onto," said visitor Stacy Sit. "It reminds me of the make-believe jungle gyms in schoolyards."

Melvin Edward's sculpture, entitled "Homage to My Father and Spirit," was constructed in 1969, commissioned by a grant from the National Endowment of the Arts. The painted and stainless steel work was originally on view in front of the Andrew Dickson White House before it was moved to the museum grounds. "The piece is intended to be a tribute to the artist's father," said Leavitt. "The shiny part represents a mirror."

The artists of the pieces constructed the works to allow individuals to view the idea of space in different ways. "The sculptures are primarily spatial statements that have to do with the artists' concept of structure, and ways to encompass open space with sculpture," said Leavitt. The placement of the pieces was carefully determined to enable viewers to develop spatial understanding. "We purposely positioned the works so that they could be viewed from different angles and not be crowded," Leavitt added.

Reactions to the works are varied. According to Leavitt, a number of curious individuals inquire about the meaning behind and composition of the structures. Many students, however, express dislike and confusion about the works. "I think they are odd and I do not understand why they're here," said Kathy Dedrick, '89. "To me, they are not special and most students don't care about them," added Libby Bauer, '89.

"Richard Evans, II, Number III" lies in front of the Johnson Museum's parking lot. The structure reminds viewers of the make-believe jungle gyms in playgrounds.
of Art

Another interesting sculpture, Jacques Lipschitz's "The Song of the Vowels," rests in front of Uris Library. The 80 inch tall structure, mounted on a pillar, depicts the inspiration Lipschitz received from the harp section of the Paris Symphony Orchestra in 1927. The work represents his image of vibrating harp strings and big flying birds, and is devoted to glorifying nature and mankind. "It's really profound," said Homer Cheng, '88 of the sculpture. "Too bad most people do not realize what it represents." Farah del Pilar concedes, "Most people just sit around it.

Besides creative sculptures, Cornell possesses an impressive painting collection. Willard Straight Hall, for example, houses many fine paintings and prints donated by Michael Straight, son of Willard Straight, '01, administrative officers and alumni. "The idea was to make this place a living gallery so that students could live in it and enjoy it," said Jennifer Van Alstine, the Straight's Arts Project Program Coordinator. "Michael Straight felt that good art should be placed in buildings where people live and work. He wanted to decorate the place in memory of his father," she said. Thus, in 1958, the William C. Whitney Foundation, which Straight chaired at the time, granted the University $25,000 for purchasing paintings, drawings, etchings, prints and sculptures for the student union. Straight suggested that the collection be devoted to American art from 1925 up to the present.

The mural decorations in the lobby of the Straight represent different phases of character. Artist Ezra Winter painted the continuous frieze to symbolize the different parts of an ideal character, such as that of Willard Straight. At the right of the entrance to the Memorial Room, for example, is courage, symbolized by a youth attempting to subdue a unicorn. The mural at the left of the Browsing Library entrance represents diplomacy; here, a European and an Asian individual meet to develop a friendship and learn from each other. "The murals are nice and add character," said Jeanne Stanfield, '90. "It makes the building different," agreed Yahlin Chang, '89.

A number of newer paintings have also been added to the collection. In 1972, for example, three new works were purchased to balance the abstract pieces in the Straight with more realistic depictions. Barkley Hendrick's "Down Home Talk, " currently in the Music Room, is a painting of a black man holding a saxophone while his other work, "Junkie, " also in the Music Room, shows a black youth wearing a hat and smoking a joint. In the past, some works have risen in value that they have had to be moved to the museum, said Leavitt. Childe Hassam's "Lower Manhattan, " is one such work.

Many other artistic works are displayed throughout the Straight. Seven antique Chinese silk panels, originally hung in Buddha Temples and dating back to 1575, are in the International Lounge. And, the water color Japanese Noh Theatre prints are exhibited along the corridor leading to the hall's theatre office.

Numerous other art works adorn the Cornell campus and heighten its aesthetic beauty. Some students recognize the quality and benefits of the pieces. "A lot of the art is often not explicitly noticed, but it gives Cornell a quality that creates a subconscious awareness and that makes the campus even more beautiful," said Peter Michel, '89. Unfortunately, most students are often unaware of or even damage the pieces. "Too many Cornellians just do not appreciate the art," said Leavitt. □

David Van Schlegelle's sculpture overlooks like slope, just south of the Johnson Museum's parking lot. The structure is a spatial statement representing the artist's conception of sculpture and open space.
Exercise. It’s one of those things that people say they wish they had more time for, or that they could be more enthusiastic about. Such excuses are common. Yet there are people at Cornell who do find time for it and who are enthusiastic about it. The key seems to be fitting exercise into a busy schedule and many do this by exercising on their own, rather than in Cornell-run physical education classes.

“I feel better about myself when I’m in shape and exercising,” Denise Feeley ’87 said. Feeley ran on the track team her freshman year and found the several-hour daily practices too time-consuming to fit into her schedule. By running on her own, however, she can easily fit in a half-hour or so a day. “I can concentrate more when I exercise and it is really important for me to be able to fit it into my day.” Ithaca is not the best place for running, however, according to Feeley. “The hills just kill me. They’re great for your muscles but they’re really exhausting to run up.”

Others enjoy the challenge of tackling the steep hills. Mike DeSarno ’87 said that he used to go out late at night to run up Buffalo Street and Williams Street in Collegetown. “I really used to struggle up those streets,” DeSarno said. “I’d go late at night because then no one could see me huffing and puffing as I made my way up. Some nights it really took me a long time to get to the top but I always felt great after I did.”

“I feel renewed after a physically draining workout,” Susan Norton ’88 said. Norton attends an aerobics class three times weekly. “The class really helps me work off a lot of stress,” she said.

Students like Feeley, DeSarno and Norton exercise “independently.” Although Cornell offers many credit and non-credit physical education courses, not everyone can schedule these courses into their everyday activities. The aerobics class that Norton attends is run independently of the athletic department. The class is held in a lounge at the Law School and is taught by a student. It is open to students, faculty and staff. Attendance is not mandatory and so class members may skip classes every now and then when they are pressed for time.

While Cornell does have athletic facilities that are open for use by students, faculty and staff, the hours that they are open are limited and not convenient for everyone. According to Cassie Courtwright, who works in the cage at the Helen Newman gymnasium, the gym is used mostly for physical education classes and not for independent student exercise. “Helen Newman is a teaching facility, not a recreation facility,” Courtwright said. The gym’s swimming pool is open for use by students, faculty and staff but only at certain times of the day. Courtwright said that there are always requests for more open pool hours. Since some students enjoying exercising in gyms but find Cornell gym hours inconvenient, they turn to area health clubs. Lynn Cooper ’88 is a member of a fitness club in Ithaca. She said that what she likes best about the exercise classes at her club is the flexibility of the class schedule. Every day, aerobics and toning classes run continuously so that almost everyone can find time to attend. Cooper also enjoys the rewards of exercise. “I like the classes because they are mentally relaxing and I don’t have to think,” she said. She added that the group classes are good because there is a certain amount of pressure to exert one’s self and keep up with everyone else.

While some exercise to push themselves and work up a sweat, others prefer to take their time and enjoy the scenery. Julie Baumler is another person who schedules her own independent exercise program. Baumler said that she walks both days of the weekend on backroads and walking trails. “I feel very relaxed and away from the Cornell atmosphere when I go out walking,” Baumler said. “I’ve gotten a chance to see a lot of parts of Ithaca that I wouldn’t have seen otherwise.” Baumler said that she also bowls from time to time for a change of pace.

So it is possible for Cornell people to fit in time for exercise, despite busy days and heavy schedules. “Flexibility in an exercise program is important,” Baumler said. “I would never be able to fit in an exercise class run by the school because my schedule is so tight. But somehow exercising on my own seems to fit right in.”

by Amanda Meadus ’88
EATING LIKE A PIG

"You're eating like a pig."
We have all been accused of eating like pigs; caught in the act of eating more than anyone thought humanly possible. The truth is, we do eat like pigs—all of us—every day of our lives.

For the past 10 years, Dr. T. Richard Houpt has been conducting research on the digestive tract of the pig. His work may one day lead to a practical application of his findings to human weight control. Houpt said that the pig is a good model to use because of the similarities between its digestive process and that of humans. "Pigs and humans eat similar things," he said. "Both are omnivores; they eat meat as well as plants, and pigs are infamous for eating garbage—which is basically leftovers from human consumption."

The research Houpt is conducting was not started for the purpose of finding an answer to the problem of overeating faced by many humans. His research is an offshoot of a project initiated by his wife, Dr. Katherine Houpt, studying the control of food intake in pigs at the Cornell University swine farm.

Previous studies on food intake of animals have taken a backwards approach to the problem; there has been much time and effort put into the search for a mechanism that makes animals start eating. The research Houpt is conducting is geared toward finding out exactly what makes pigs stop eating.

The experiments Houpt conducted focused primarily on the size of the meals a pig will eat during a day and how this relates to why the pig will stop eating. "Contrary to popular belief, pigs do not just eat constantly. They will eat a certain amount and stop."

Houpt has uncovered three inhibitory signals that start to work within four minutes of the beginning of a meal to make a pig stop eating. Houpt describes these mechanisms as "brakes put on a hunger that was there all along." He has found that when these inhibitory signals weaken, the animal feels hungry and begins to eat.

The first mechanism described by Houpt is distention of the stomach. "When a pig has eaten enough to fill its stomach, a sensory receptor in the stomach sends a message to the brain that the stomach is full. This signal depends on a negative feedback system that slows, and may eventually stop the pig from eating."

"Physical fullness alone may not cause a pig to stop eating," according to Houpt. "It appears that stomach distention combined with a second mechanism that takes place in the small intestine provides a more accurate explanation of the inhibitory process," he said.

The second mechanism is a reaction of the nervous system to the concentration of nutrients in the food the animal has consumed. The brain receives an inhibitory message from the small intestine when the pig has ingested an amount of nutrients comparable to the nutrients the animal has expended through its daily activities. "This second mechanism is a rough measure of how nutritious the food the pig has consumed is," according to Houpt. "The more nutritious the food is, the more quickly the brain will receive the message from the small intestine and the sooner the pig will stop eating."

The third inhibitory signal uncovered by Houpt involves the release of a chemical, a hormone, by the small intestine. "When a certain amount of proteins and fats are in the pig's small intestine," Houpt said, "the small intestinal releases cholecystokinin (CCK), causing the gall bladder to contract and the pancreas to secrete enzymes. The bile and enzymes help in the digestion of fats and proteins." Furthermore, the release of CCK inhibits eating in the pig, and the meal ends. The chemical, like the mechanism that measures the osmoconcentration of food in the small intestine, is a way for the body to measure the value of the food eaten by the pig.

"As a pig eats, the three inhibitory signals provide stronger and stronger feedback to the brain, and eventually the pig will stop eating," said Houpt.

Presently, Houpt is investigating drinking and eating patterns in pigs. The possibilities of practical applications from findings based on this research are not as clear as applications of the inhibitory signals, but Houpt feels that the studies will lead to a more thorough understanding of the digestive system and ingestive behavior of the pig. And with a more thorough understanding, he feels that his previous findings will be of more use to the scientific community as a whole.

Regarding the possibility that his research might some day be beneficial to humans, Houpt said "Once you know how something works, then you can set your mind on solving any problems you have with it. Right now, we are concentrating on the mechanisms involved in the functioning of the digestive tract of the pig rather than any implications our findings may have."

by Amy J. Palladino '88
A high school senior sits cross-legged on his bed, surrounded by piles of college recruiting materials. A large red booklet catches his attention. The title? “Cornell University.” He dreams about what he’ll learn, how he’ll grow, the fun he’ll have, and the friends he’ll make.

Later that evening his parents read through the pages, as vivid pictures are painted of a university in Ithaca, NY. The language is fresh and easy to read. The design is colorful and attractive. The publication is just one of many produced at Cornell’s Office of Publications Services.

According to Dorothy Pasternack ’59, director, “The Office of Publications Services aids Cornell in promoting itself, primarily to outside audiences—prospective students, alumni, foundations, and corporations. Our job is to make sure publications are accurate, cost-effective, and targeted in sensible ways,” she said.

Cornell’s Publications Office was established in the 1960s. In 1985, the office had 10 employees. Two years later, the Office of Publications Services employs 23 people. In the past six years the office has not had a single turnover. The role has changed for the central University publications office as one administrative unit was transferred to it and an in-house marketing unit added.

John Burness had a few ideas about Cornell publications when he became vice president for University Relations in January 1986. “Publications were well written and had good design, but many were ineffective as communication efforts,” Burness said.

The key result is that the University hired three staff people at Publications for a Consulting Services division. Cynthia McFarland is the associate director for Consulting Services. “We have a consistent and systematic way to analyze publications,” she said. Consulting Services researches what Cornell has to offer in a particular area, who the target audience is, and if the current publications are in fact reaching that audience effectively. McFarland and her staff also examine letters and office communication procedures. They are currently analyzing campus life communications.

Consulting Services’s first task was to study admissions communications. After a four-month study, McFarland and her staff produced a communications analysis and proposal for a new admissions strategy. Consulting Services is continuing to work with admissions to produce their recommended series of materials.

Perhaps the most visible change was in the Cornell viewbook, which introduces Cornell to prospective students. It was totally rewritten, and 140,000 copies were printed. Each undergraduate college is featured on a two-page spread.

Nancy Hargrave Meislahn ’75, director of the Undergraduate Admissions Office, reported that all but one of the seven undergraduate colleges have experienced a significant increase in applications this year. “The viewbook is outstanding but probably not the sole reason for the increase,” Meislahn said.

Publications Services works with many other departments on campus as well. Pasternack said the office works closely with Cornell’s Division of Public Affairs and University Development, for example, to produce quality fund raising brochures.

It is not mandatory for Cornell departments to use Cornell’s Office of Publications Services. “There is no way to control what is printed,” Pasternack said. “We would at least like to lead by example,” she said.

Pasternack’s office produces close to 400 titles every year, generating millions of copies of Cornell publications. Richard Gingras, assistant director for Graphic Purchasing, reported that Cornell University spends about $10 million every year on publications. The price of paper, typesetting, printing, binding, delivery, and mailing is figured into that amount.

Graphic Purchasing changed from a mandatory to a voluntary service in 1986. “We work to get the best deal possible,” Gingras said. “We are a service organization that doesn’t charge to find the best vendor for the job.” Each department that uses the Office of Publications Services is responsible for the costs of publication, like printing, binding, and mailing.

Burness said that there is a higher demand for Publications Graphic Purchasing under the new voluntary system. “It has brought more departments to University Publications which means more quality control and savings for campus units,” he said.

Computers help to cut costs. “Our office saved at least $12,000 for campus clients in composition costs during the first four months of the fiscal year,” Pasternack reported. Eighty percent of the publications at Publications Services are produced electronically. “Computers are powerful design tools,” Pasternack said. “You can change the face with a push of a button. We also get higher quality layouts and graphs with the computer,” she explained.

Burness is pleased with the office. “The material has been upgraded in quality, and the staff is targeting publications much more effectively now,” he said. “Cornell has a unique structure, but that’s not what a 17- or 18-year-old high school student wants to read. It’s the character and values that make Cornell great.”

His thought is in agreement with Pasternack. “There is a vitality here at Cornell that you don’t find everywhere,” she said. “Our office can portray that unique quality by being totally honest,” she added.

Cornell is more than words and pictures on a page. Its publications will bring alive that magic which excites prospective students, parents, alumni, and friends of the University now and for many years to come.

by Sharon L. Detzer ’88
President Rhodes Receives Science Education Award

Cornell University President Frank T. Rhodes was recently awarded the 1987 Justin Smith Morrill Award by the Cooperative State Research Service of the U.S. Department of Agriculture. The award is given in recognition of his "demonstrated leadership and significant contributions to the principles of higher education in the food and agricultural sciences." Rhodes received the award in Washington, D.C. at the centennial meeting of the National Association of State Universities and Land Grant Colleges on Nov. 9, 1987, where he opened the session with the Morrill Memorial Lecture. Sponsored by the USDA Office of Grants and Program Systems, the Morrill Memorial Lecture is presented as a tribute to Justin Smith Morrill, the author of the land-grant legislation of 1862 that helped establish the nation's land-grant college system.

Rhodes has been Cornell's president since 1977. He has received numerous honors, including 14 honorary degrees; he is the author of five books and more than 70 major scientific articles. Rhodes is also a member of several boards, including the National Science Board, which determines research policy for the National Science Foundation.

Cornell and Israeli Scientists Team Up

A horticulturalist at Cornell's N.Y.S. Agricultural Experiment Station at Geneva and two Israeli counterparts have embarked on a major international research project to attempt to develop better tissue-culture and genetic-engineering techniques for grapevine improvement.

Dr. Bruce Reisch '76 will join Drs. Pinchas Spiegel-Roy and Dr. Aliza Vardi, both of the Agricultural Research Organization, Volcani Center, in Bet Dagan, Israel, to seek new and improved techniques to insert genes into cultured grapevine cells and to regenerate plants from those cells. The trio is working under a $180,000, three-year grant from "BARD," the BiNational Agricultural Research and Development Fund, established in 1977 by the U.S. and Israel to promote and support research for the benefit of both countries.

Cornell University has launched a major food and nutrition program to help policy makers throughout the world alleviate malnutrition, especially in the Third World. Program Director Malden C. Nesheim, Vice Provost for Planning and Budget, said malnutrition is not due to insufficient food available in the world, but to inadequate policies. Cornell's program will provide a forum to examine the U.S. policies relative to food and nutrition.

The program will be funded by a $450,000 grant from The Pew Charitable Trusts. The grant will support student fellowships in international nutrition, overseas research by students and faculty and the yearly appointment of a visiting professor to increase the program's resources.

COUNTRYMAN CAPSULES

Testifying before a recent Senate hearing, Ralph W.F. Hardy, president of the Boyce Thompson Institute for Plant Research at Cornell University, cited biotechnology as the key to the competitiveness of U.S. agriculture.

Hardy, an expert on biotechnology and deputy chairman of BioTechnica International, a biotechnology firm in Cambridge, Mass., said the United States is the world leader in the field and "should remain so if we keep attracting quality scientists to agricultural research and supplement and redirect our research to the high-reward opportunities." He proposed several steps to maintaining America's leadership, including attracting more creative scientists to agriculture and encouraging more realistic regulations on biotechnology.

The hearing was held jointly by the Senate Committee on Agriculture, Nutrition and Forestry and the Technology and Law Subcommittee of the Senate Judiciary Committee.

Frederic D. Morris '37, now of Los Fresnos, Texas, has published a historical novel entitled Pumpkin Hollow, A Tale of a Developing Nation. The 27-chapter book re-opens the question of the Commodity Dollar, an economic theory proposed by President Franklin Roosevelt, Dr. G.F. Warren of Cornell and Dr. Irving Fischer of Yale. The book is published by Carlton Press, New York, N.Y., and will be on the market by April 1988.

Way Honored by Penn State

Dr. Roger D. Way, a professor emeritus in pomology at Cornell's N.Y.S. Agricultural Experiment Station, Geneva, has been honored by Penn State University as one of 20 'Alumni Fellows,' named in 1987. Reserved for internationally recognized corporate executives, scientists and humanitarians, the Alumni Fellow award is one of the highest bestowed by Penn State University.

Dr. Way, a world leader in the field of fruit breeding, has been one of the most productive and successful breeders of apples, introducing such varieties as 'Empire,' 'Jonagold,' and 'Jonamac.' He has also introduced new varieties of cherries and elderberries. In 1982, he received the prestigious 'Wilder Medal' from the American Pomological Society.

A native of Pennsylvania, Dr. Way received both a B.S. (1940) and M.S. (1942) from Penn State and a Ph.D. (1953) from Cornell. He joined the Station in 1949 and served as chairman of the department of Pomology and Viticulture from 1982 until his retirement in 1983.
Between 10 am and 4 pm on weekdays, Room 341 of Caldwell Hall on the College of Agriculture and Life Sciences quad is a bright, sunny room filled with overflowing shelves—hardly the place where you would expect to find "fugitive literature." Yet, the Center for the Analysis of World Food Issues (CAWFI) houses books, journals, and papers as well as what Pam Schwartz MPS '88, head librarian of the CAWFI library, calls "fugitive literature"—not literature about fugitives but "literature that is hard to get, hard to find out about and not a book or journal."

"What many people don't realize is that we carry newsletters and periodicals about international agriculture and development issues that even Mann and Olin libraries don't have," said Schwartz. "We have recent reports and papers originating from the Ford and Rockefeller Foundations, United States Agency for International Development (US AID), the International Rice Research Institute (IRRI) ... you name it," said Schwartz. Academic papers given at conferences address topics as varied as agroforestry to women in development, in places as widespread as Argentina to Burma to Zaire. One part of a shelf is devoted to reserve readings in international agriculture classes, another shelf holds papers authored by faculty members. In addition, the library has a listing of audio-visual aids stored at the International Agriculture Program's office nearby, available for use by Cooperative Extension agents and others who are interested in educating people about agricultural development in other countries.

CAWFI probably originated as a couple of very crowded bookshelves in international agriculture Professor Edwin Oyer's office, said Schwartz, and later evolved under the nurturance of Professor Larry Zuidema, another member of the program. "Professors were being sent valuable information by institutes and agencies from around the world, and it just wasn't getting distributed," said Schwartz. Thus the creation of CAWFI, which has three main goals: to supplement the International Agriculture Program curriculum and its activities, to provide resources for both faculty and students interested in international development and to maintain a collection of otherwise hard to obtain literature for undergraduate and graduate students interested in international development and agriculture.

The International Agriculture Program maintains close ties to CAWFI, disbursing monies from a grant issued by the U.S. Office of Education for new acquisitions to the collection. "To the users of CAWFI, it is the most visible part of the CAWFI grants but by no means the only part," said Robert Bergman MPS '88, an administrator in the International Agriculture Program.

The CAWFI grants also allow for a new graduate assistantship each year to be given to a student in the Master's of Professional Studies (MPS) degree program in international agriculture. The student must act as head librarian in addition to being a teaching assistant for at least one undergraduate survey course in international agriculture, although Pam Schwartz also coordinates a graduate seminar which features speakers from abroad as well as from the Ithaca area and the rest of the nation. This latter seminar is open to the public.

In addition to Schwartz, CAWFI is staffed by two work-study students and volunteers from the Camel Breeders Association, an organization focused on just such development issues.

The Camel Breeders volunteer time and their familiarity with international issues of development by helping to organize the material in different subject areas, according to Helen Kim BA '89, a work-study student staffer. They also maintain a job file for graduate and undergraduate students. Kim noted, "Being in the CAWFI library is a great way to meet a lot of very interesting people—for example, many of the Camel Breeders are ex-Peace Corps members." Hubert H. Humphrey Fellows, midcareer professionals from Third World countries here to enhance their skills and knowledge at U.S. institutions, can also be found at CAWFI, as well as a professor or two.

Although use of the library has increased recently, Schwartz said that many facets are underused. "People just don't seem to realize the research value of periodicals. Instead, they are attracted to books and journals—but the nice thing about periodicals is that you can browse as well as do research. And we encourage browsing."
ABOUT THE ISSUE
As our cover suggests, this issue examines creatures (great and small). We invite you to study a rare insect collection and to learn how a soothing environment helps chickens grow faster. We even show you how to avoid Salmonella bacteria that may be in those chickens. For those who aren’t animal lovers, we offer exciting news about Cornell organizations, students and alumni.

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It is the policy of Cornell University actively to support equality of education and employment opportunity. No person shall be denied admission to any educational program or activity or be denied employment on the basis of any legally prohibited discrimination involving, but not limited to, such factors as race, color, creed, religion, natural or ethnic origin, sex, age, or handicap. The University is committed to the maintenance of affirmative action programs which will assure the continuation of such equality of opportunity.
Millions of insects lurk in Comstock Hall. They range in size from microscopic gnats to giant, mouse-sized beetles with huge, evil-looking pinchers. Brilliantly colored butterflies with wing-spans wider than that of a small bird add splashes of color to this formidable army of insects. Six-inch long grasshoppers and walking sticks gaze hungrily at the world with black, beady eyes. Fortunately, all of these exotic creatures belong to the insect collection of Cornell's entomology department and are dead and safely pinned in neat rows inside glass-covered Cornell insect collection drawers.

The collection dates back to around 1869 when John Henry Comstock, one of America's premier entomologists and founder of the entomology department at Cornell, donated his personal collection to the University, said E. Richard Hoebeke, the collection manager. In May 1985 the collection moved into the new Comstock Hall, where it is currently housed. This move resulted in an increase of approximately 2,000 square feet of storage space.

Today the collection consists of about five million pinned insects, representing over 200,000 species. Cornell's insect collection grows by 20 to 25,000 specimens a year and among universities, it is second only to Harvard in terms of overall size. "Cornell's collection is the seventh or eighth largest in North America, but it is small compared to the granddaddy of all collections, that in the British Museum, which has over 60 million specimens," said Hoebeke.

Cornell faculty, staff and students often donate their individual collections to Cornell's collection, and some help prepare and identify the new additions. "Beginning in 1972 the collection started receiving a major donation from a retired machinist on Long Island, who gave us over 20,000 tropical butterflies, probably worth thousands of dollars to the professional collector," said Hoebeke.

Several techniques are used to capture insects in the wild, said Hoebeke. Traditional sweep nets and traps are used as well as setting out a black light at night, which is very effective in tropical areas. "Once in Puerto Rico we went out at night into the pouring rain to collect insects. We put a white sheet behind the black light and within minutes, the sheet was covered with insects. I've never seen anything like it," Hoebeke said.

Once captured, the hard-bodied insects are killed with cyanide, pinned, labelled, and placed into drawers with glass covers. Hard-bodied insects keep indefinitely, but are regularly fumigated with naphthalene to keep out carpet beetles, which feed on dead insects. Soft-bodied and aquatic insects are preserved in 70 percent ethyl alcohol solution and stored in vials in large carring jars.

Cornell work-study students label and mount new additions to the collection. Unusual insects are often difficult to identify and unidentified insects are regularly loaned out to experts around the country. "One of the prime functions of the collection is that it serves as a resource to help identify new material," said Hoebeke. Currently, Cornell's collection has a large number of both exotic and local unidentified insects which will be loaned out to specialists for identification. "Identifying insects is a never-ending job," Hoebeke said. "You can spend your whole life on it."

Although some of the insects may be mysterious, few are poisonous. "Stinging insects, like wasps and bees can make you very sick if you're allergic to them, but not many insects are actually dangerous," said Hoebeke. "Some beetles have very large mandibles which hurt like hell if they pinch you, but if you stay out of their way, they won't hurt you."

Rare tropical butterflies can be worth hundreds to thousands of dollars to serious insect collectors, especially if the species is endangered or extinct. The sparrow-sized South Asian birdwing butterfly, for example, is now endangered. Because collecting bird-wing butterflies is now prohibited, Cornell's existing specimens have probably increased in value.

Closer to home, the Karner Blue butterfly, which is native to New York state, is now endangered and is found only in Karner Pine Bush, a large inland pine barren in the Albany area. As a result, Cornell's specimens of the Karner Blue will probably increase in value as that butterfly population decreases.

Monetary value aside, Cornell's insect collection is irreplaceable. "Besides the actual value of some of the insects, the amount of man-power that has gone into creating and maintaining the collection is immeasurable," says Hoebeke. "You could say the collection is priceless." □

by Melba Kurman '89
College students relish their free time. Although college offers them hundreds of ways to spend it, one leisure-time activity has proven widely popular among students across the nation: drinking.

Aware of the problems that can accompany this pasttime, a small group of Cornellians has picked up on a national trend to encourage responsible drinking. They chose to channel their efforts through the campus Greek system. The result? Project GAMMA: Greeks Advocating the Mature Management of Alcohol.

Randy Stevens, Director of Greek Life at Cornell, said that he and Mickey Shaghalian '88, Speakers and Faculty Officer of the Panhellenic Council, both received information in the mail in the fall of 1987 about National Collegiate Alcohol Awareness Week. When the two were discussing the potential for similar activities at Cornell, Shaghalian came up with the idea to sponsor a Greek-related Alcohol Awareness Week.

"Many schools have alcohol awareness programs; we're one of the few that don't. And Greeks should be the ones to take this by the horns," as fraternities and sororities currently do little to educate about alcohol, Shaghalian said. Stevens had been involved with a GAMMA (Greeks Against Mismanagement of Alcohol) chapter at the University of South Carolina, and suggested that Shaghalian found a GAMMA chapter at Cornell.

Stevens and Shaghalian timed their idea well. As they began to plan activities for the alcohol awareness week, problems arose with Greek tailgates at football games. The Dean of Students saw that fraternities emphasized large keg parties and became more alert to the alcohol issue, Stevens said. He saw that it was time for a unified effort toward alcohol awareness at Cornell.

"We put our heads together to try to focus attention on the use and abuse of alcohol on campus," Stevens said. Shaghalian and he decided that GAMMA would be an educational organization; "We're not advocating a dry campus, just education about a serious issue." Shaghalian said that students will not be told to stop drinking, but will be offered non-alcoholic social alternatives. If students learn to handle alcohol responsibly at college, they reason, they will have a better chance of being able to do so later in life.

Alexander S. Chisholm '89 of the Interfraternity Council and Stephanie Ralston '89 of Panhel joined Stevens and Shaghalian to form the four-person team largely responsible for organizing GAMMA's Alcohol Awareness Week events. Five other students from the two organizations and the Black Greek Council complete the committee.

GAMMA chapters have been successfully implemented on college campuses throughout the country; Syracuse University is a good example, Shaghalian said. Most GAMMAS are affiliated with a national organization called BACCHUS: Boost Alcohol Consciousness Concerning the Health of University Students. Gannett Health Center runs a program called ALERT that is similar to BACCHUS. An alcohol awareness week is not naturally a part of every GAMMA program, however, and few chapters sponsor one. Schools that do organize weeks usually do so through other departments such as residence life or health services. "It really depends on who takes the initiative at a school," Stevens said. "It's unique here at Cornell to have the Greek system take such a proactive approach," he said.

Cornell's Alcohol Awareness Week is scheduled for April 4-11, 1988. Events
are planned to show students that they can have fun without alcohol. Although the week targets the Greek system, only a few events will be exclusive to Greeks. “We want everyone to be a part of it,” Stevens said. Shaghalian added that GAMMA hopes to make part of the week mandatory for the Greek community.

GAMMA has planned workshops and seminars on alcohol-related topics such as responsible party planning, sexual harassment and DWI, and will host a nationally-renowned speaker who will be announced at a later date. The Greek honor society Order of Omega, for which Shaghalian is in charge of public relations, will sponsor a community reception for students, faculty, administration, and anyone else who wishes to attend.

A complex advertising scheme will inform students about Alcohol Awareness Week and its goals. Chisholm does double duty as Vice President of GAMMA and president of Madison and Tower, the student-run advertising firm that handles all GAMMA publicity. Chisholm said that the theme of the week will be a RACE toward alcohol awareness, where RACE is an acronym for Responsible Alcohol Consumption and Education. Students will be encouraged to “Get into the RACE” both figuratively and athletically; GAMMA has planned an all-night sports extravaganza sponsored in part by the Department of Physical Education’s intramural division.

A 10-person advertising team has been assigned specifically to work on Project GAMMA. “Right now the people on the team are developing the letters and public relations information that will go out to fraternities and sororities,” Chisholm said. They are designing table tents to be placed on dining hall tables, T-shirts promoting the RACE week to be given to residence hall advisors, and plastic cups, all sporting the GAMMA logo.

The cups will hold non-alcoholic drink specials at Collegetown bars and restaurants if all goes as planned, Shaghalian said. Other tentative events include a midnight breakfast in the dining halls and a panel discussion on Cornell’s alcohol policy with administration and representatives from the Greek system. The advertising team has written to many Cornell professors asking them to incorporate alcohol awareness into their lectures during the week.

Shaghalian said that plans are being made within a tight time-frame; the team is held to a mid-March deadline. “Of course, the first year of anything new is done on an experimental basis,” but events are falling into place nicely, she said.

Both Shaghalian and Chisholm are in the College of Agriculture and Life Sciences; Shaghalian is an agriculture economics major and Chisholm, a communication major. Shaghalian said that her business training paired with her natural organizational skills has helped her plan events efficiently. She found herself using information from marketing and advertising courses, as she is in charge of overseeing the marketing strategy for Alcohol Awareness Week.

GAMMA has enjoyed enormous support from the Cornell administration as a whole, Stevens said, but especially from David Drinkwater, Dean of Students and Acting Vice President for Campus Affairs. The Dean of Students’ Office has contributed generously, as have Panhel and IFC, to save GAMMA most of the trouble of raising funds. Stevens mentioned, however, that anyone wishing to contribute is welcome. The group is hoping for local sponsors and Chisholm is in charge of soliciting corporate sponsors. Stevens said that Coca Cola, Inc. and Budweiser have helped other schools get their alcohol awareness weeks off the ground. Next year GAMMA plans to apply for money from the Student Finance Commission.

GAMMA members have scheduled the second annual Alcohol Awareness Week for the third week in October, 1988, when it will coincide with National Collegiate Alcohol Awareness Week. Shaghalian said. Students will have to begin work this April to have a fun, educational program in place by next fall, she said. Next spring GAMMA intends to host a substance abuse program which will educate students about drugs on campus.

The outlook for April’s festivities? Stevens was confident that the week will address alcohol problems on campus successfully; he noted a great deal of positive feedback. “Students involved with GAMMA and RACE are enthusiastic about the project,” Chisholm said. Organizations contacted for alcohol awareness information have proven helpful, he said, and the Ithaca community supports the idea. Chisholm announced that Mayor Gutenberger has declared the week of April 4, 1988 as official Alcohol Awareness Week.

“The general consensus is, this is a great idea, why hasn’t anyone done it before?” Shaghalian said. GAMMA members and their advisor Stevens have spent much of their free time at the Dean of Students Office, but are especially excited about the results. Both Shaghalian and Stevens emphasized how much they enjoyed the work. “It’s a great reward to put together a good program for the community,” Stevens said.
The merging together of unrelated elements, as any meteorologist will tell you, is a phenomenon likely to result in a swirling storm. But for Bob Maxon '87, the combining of a few utterly dissimilar interests has developed into the beginning of an enviably smooth and successful career.

Hailing from the snow-belt of central New York state, Maxon claims to love snow and everything about it. This somewhat unusual obsession, combined with an interest in earth science stemming way back to the eighth grade, originally prompted Maxon to pursue a career as a forecaster at a weather service bureau. It was not until his sophomore year at Cornell when he discovered yet another interest, radio, which led him to consider working as a forecaster on television. The eventual successful interplay of all these disparate interests has resulted in Maxon's current employment as a meteorologist at WMGC Channel 34 in Binghamton, the second-ranked station there.

"Working at FM 93 was a real eye-opener to broadcasting," said Maxon, who did sportscasting there. "I love radio," he said, adding that the typical dress code for radio, consisting of sweats and a cap, is one advantage over television's formal dress requirement.

Maxon initially adopted the suit-and-tie attire of television for a job as a forecaster at Cable NewsCenter 7 in Ithaca after graduating with a degree in meteorology. His move to Binghamton in late January 1988 marks not only a step up to a larger market, but also to an expanded job description. Channel 34's understaffed staff means that Maxon, who before coming to Channel 34 had "not done an inch" of news reporting, often must cover news stories, as well as report the weather. "The other day I had to go cover a murder," he noted. "Imagine that—meteorologist covers murder."

Maxon is also responsible for his own writing, film editing and even camera work, but welcomes these duties as opportunities to branch out in broadcasting. Actually, the hardest part of his new job, Maxon said, is just finding his way around Binghamton, a brand new area for him.

His unfamiliarity with Binghamton also makes it a little harder to accurately report its weather. Subtleties in topography make a difference in the weather, he said. "I don't know about those innuendos in Binghamton as well as I did in Ithaca, which makes it harder for me to personalize the weather report for Binghamton," he said.

Maxon generally gets his daily weather information from the National Weather Service Bureau at Binghamton's Link Field airport and then strengthens his report with listings of record highs and lows, and other interesting weather-related tidbits. Because Channel 34 serves a fairly small market, the station does not have meteorological equipment for predicting weather. At Cable NewsCenter 7, which serves the even smaller market of Ithaca, Maxon was able to do his own predictions of the weather using Cornell University equipment.

Such a privilege is usually reserved for meteorologists working in bigger markets where there is more money. Employment in one of these "medium-sized" markets is the next logical step for Bob after Binghamton. As "a true New Yorker," he would prefer to stay in the Syracuse, Buffalo or Rochester areas. A move to a market as big as New York City would be at least twenty years away, Maxon figured, and he said he is not sure he would want to lead a life that focused entirely on weather, promotions and publicity.

Such a hectic lifestyle would undoubtedly be a radical change from Maxon's beginnings in the Meteorology Unit of the Department of Agronomy high within the top floor of Bradfield Hall. Only four other meteorology majors graduated with Maxon in 1987, none of whom now share his profession. The meteorology department is the only one of its kind in the Ivy League. "(The major) is a lot more difficult than people think and the requirements for graduation are getting even tougher," Maxon said.

The credibility that college graduates in meteorology have is fantastic, Maxon said, but it is not without its drawbacks. Once, when he was interviewing for a job as a forecaster at a Rochester television station, he was rejected on the grounds of having a background that was too technical. A radio dee-jay landed the job instead. "Sometimes I almost wish the top of my résumé said communication instead of meteorology because I think it would open more doors for me." Although Maxon may someday be interested in returning to sportscasting, for now he is content with meteorology. No matter what outcomes Maxon is predicting—be they weather or sports—the fact remains that he "loves being on the air." It past performance forms a reasonable basis for future predictions, a forecast of continued success in any area of broadcasting seems only logical.

by Chris Costanzo '88
Do you remember walking across the ag quad in six feet of snow? That's right. Six feet. Maybe not all at one time, but a thirty year average shows that Ithaca receives 72 inches of snow per winter. And that makes for a lot of skidding, slipping and sliding on Cornell's 15 miles of roads, 20 miles of sidewalks, 114 acres of parking lots and over 3,000 steps. Yet, thanks to the Grounds Department's snow removal efforts, walking and driving are surprisingly safe activities.

"It's tough getting up Library Slope after a snowfall," recalls Dennis Osika, Superintendent of Grounds and overseer of snow removal at Cornell. A 1964 graduate of the College of Agriculture and Life Sciences, Osika can relate to the difficulties snow brings to students. "Pedestrian safety is vital on campus. With thousands of people depending on us to get them to and from class or work safely, our job must be quick and thorough," he added.

"Clearing out Cornell is different than anything else around," Osika explained. "If it snows really hard, you can close a store because people don't need to shop. Cornell never closes because this is our home as well as our workplace." Roads are given top priority to maintain fire engine accessibility to dorms. In addition, paths must be clear for research to be monitored and for animals to be fed. "Cornell is a little more helpless than ordinary communities because residents don't have their own snow removal equipment," he added.

"Each snowstorm is like going to war for us," said Osika. "You have to fight snow with whatever you have available in operational equipment and personnel." It is surprising that his snow removal "army" is composed of only 35 people and with as many as three people often out on sick leave or short-term disability, the "army" is reduced to 32 soldiers. Artillery is limited to two salt spreading vehicles and two dump-trucks with plows for roadways, a front end loader and four 3/4 ton, "4 x 4" pickup trucks with plows for parking lots, several farm-type tractors with plows and rotary brooms for sidewalks. "We use salt sensibly," said Osika.

The grounds department tries to limit the use of salt to slopes and areas where ice or hardpacked snow have developed. "Plows work great for snow removal, but salt is still the most economical de-icing tool we have. With our massive pedestrian population, it is essential that vehicles can brake in emergencies and don't skid up onto walkways adjacent to streets," he added.

Although there is no typical snowstorm, procedures for removal of a nighttime snowfall usually follow a similar pattern. When the roads, walks or steps start to get dangerously slippery, the Department of Public Safety alerts night customer service people. They call Osika or his assistants. A salt spreader is then assigned to keep roadways passible. Osika comes onto campus from roughly midnight through 3:00 am and notifies workers to start heading in to clear out Cornell as he sees necessary. "This is the most challenging part of the job," said Osika. "You can come out a hero or a bum depending on how you call it."

In an ideal situation, the snowfall would start in the early evening so that groundsworke could start plowing lots at 11:00 pm. Plowing would begin on sidewalks at 4:00 or 5:00 am, depending on how heavy the snow is falling. "If we start too early, the walks will be covered up again by the time people start onto campus," explained Osika, "and if we start too late, it's just not safe."

"The time of day of the snowfall is critical," said Osika. The worst time is the wee morning hours just before the business day begins or in the late afternoon when the majority of commuters depart from campus. "During these times," he explained, "there is so much traffic that we can't effectively get around with the plows."

"It's not uncommon for my people to put in 14 hour shifts during a storm," Osika said. "They have tremendous loyalty which is necessary for the severity of the winters, the size of the staff and the quality of job that is expected of them," he added. "We can't push workers too far or we'd be negligent. For the most part though, they are tough, positive, 'can-do' people who take pride in saving lives." Time and again, the Grounds workers have demonstrated that they 'can-do.'

Cornell's snow removal team battles valiantly against winter's fury.

by Robert A. Rosenberg '88
Solving Pet Problems

by Amy L. Sliter '88

The criminal element...dealing with it has progressed to the level of a science. The latest and most advanced technology is being employed to sniff out aberrants in our society in the attempt to bring a halt to offensive crimes. Most of you are familiar with systems being used in banks, casinos, and other public places to scan and record the movement of individuals. Cameras are placed in strategic locations making the potential criminal wary and the innocent feel slightly self-conscious. The technology of videotaping is now being used to record the suspicious behavior of our feline offenders.

Although you may not be a pet owner, you can perhaps sympathize with the annoying problem of having a cat disdain its litter box to wreak havoc on rugs, curtains and expensive upholstery. To some unfortunate owners, these cats seem to commit premeditated and deliberate acts of crime. In an effort to discover the real reasons behind annoying behavioral traits, Katherine Houpt VMD, PhD, is using videotape to monitor feline elimination habits. With research into these and similar behavioral problems with the use of behind-the-scenes surveillance techniques, Houpt has helped many people solve troublesome pet problems.

Houpt is an associate professor of veterinary physiology in the Department of Physiology at the College of Veterinary Medicine. She is also Director of the Cornell Animal Behavior Clinic and author of many scientific papers on animal behavior. Although horses have a problem with your cat defecating, urinating or spraying (urinating on vertical objects) everywhere but its litter box, she sets up her video equipment in your home to monitor and diagnose its behavior. Cats misbehave for different reasons so treatment must be custom-designed.

Paws up! Obedience schools train common pets to listen to their masters, but some pets need more.

The causes of cat misbehavior can range from environmental and social factors to physical problems the cat may be experiencing. For example, a new baby in the house, a new spouse or even a new rug can trigger unwanted behavior. “But the most common problem is that the owners don’t clean the kitty litter frequently enough,” said Houpt. “Barn cats and animals oriented to the outdoors never use the same spot twice, so in cleaning the kitty litter it at least fools them into thinking it’s a new spot,” she said. Overcrowding, or too many cats sharing the same litter box can also lead to indiscriminate soiling. Some cats even demand two litter boxes!

Animal behavior problems are not all environmental, however. Some are the result of bladder stones or urinary tract infections that lead the cat into associating painful elimination with its litter. To check for these possibilities, every cat is first tested and treated for medical problems before further action is taken.

Treating feline problems is much like treating any other animal behavior problem. Reward for good behavior is more successful and kinder to both pet and owner than punishment for misdeeds. Punishment, to be effective, must be instantaneous, said Houpt. Getting caught red-handed is the only way an animal can associate the crime...
Houpt's philosophy of positive reinforcement is readily apparent in her treatments. For instance, older Siamese and Burmese cats can develop a habit of sucking on woollen materials and aren't fussy if it's an owner's best suit. To cure them, Houpt suggests a regimen of substitution where the animal is rewarded when it sucks on permissible fabrics.

Besides cats, Houpt also treats dogs, especially dogs who show aggressive behavior patterns. She has written depositions for court cases involving dogs accused of violence and has been consulted in instances where owners are suspected of cruelty. "Dogs behave much better if they have a secure relationship with their owner. Firm control will eliminate 80 percent of problems dog owners experience with their pets," said Houpt.

Cases involving pit bull dogs were investigated by Dr. Lockwood, a veterinarian at the Humane Society of the United States. His results showed that seven out of twenty owners were criminals with records of violence. Only one owner was female and half of the owners knew their animals would go after people.

Eleven of the twenty pit bulls for which information was available showed signs of being abused. Responsibility on the part of the owner could possibly cut down on the number of attacks, especially when the dogs are bred and trained for the ring.

Because horses are her specialty, Houpt has been investigating why some mares reject their foals. As each mare is unique, reasons for behavior are also varied. Displaced aggression against other adult horses, fear of her own foal—especially if it's her first-born or too many people near her can cause a mare to snub or attack her foal. She has also studied the sexual behavior of stallions and is researching the general behavior of wild horses in zoos in hopes of someday returning them to wild ranging herds.

The Animal Behavior Clinic will make appointments for owners who are having behavioral trouble with their pets. But Houpt stressed that people shouldn't ascribe human emotions to their pets when trying to understand their behavioral troubles. It bothered her that people try to understand their pets in human terms. Pets often react instinctively to perceived threats or even playful behavior. "Therefore, instinct is responsible for the actions of one's dog or cat—not emotions like spite or envy." ☐
EDDA Internship Feeds the Future

Hillary Brodsky '88 was one of the first people in New York state to try Cherry Coke. It wasn't because she got up real early to hit Sloan's Supermarket either. No, she was not spending any money whatsoever at Sloan's. In fact, Brodsky was making money working as an intern in the food industry, gaining valuable experience through the Eastern Dairy-Deli Association, or E.D.D.A.

In an article in Food Merchants Advocate's December, 1987 issue, Brodsky, a business management and marketing major, described the time she spent with Dorman-Roth Food Inc. "This summer I was given the opportunity to experience a new style of management and to participate, first hand, with many of the preparations for a new product launch. This has given me quite an advantage in handling my college assignments and a better understanding about the food business," she said.

Internships in the food industry are poorly advertised, but the benefits are greatly sought after. The monetary benefits of a 1988 internship with the E.D.D.A. have been increased to $200 per week, a growth of almost 40 percent from 1987. And that's not even the jackpot. There is also a $1,000 tuition grant given to each intern, and that reward has been increased from $750 in 1987. To spread the frosting even thicker, the E.D.D.A. offers an extra bonus of $500 to the winners of a post-internship essay contest about "What I Did This Summer".

And what interns do is not the average Joe summer job. "We are providing an excellent opportunity to get an inside look at food companies, and to get a good background. We are not hiring you to be a gopher," said Lorraine Hoyt, assistant to Executive Administrator Sy Goldstein. "They hired a mind," Brodsky said. Accordingly, the list of fields available doesn't have 'gopher' in it anywhere. Interns work in management, marketing, accounting, sales, production engineering, human resource management and merchandising. "If you are responsible, career-oriented, want the work experience, and especially if you'd like to learn about the field, then you should definitely look into interning with the E.D.D.A." Brodsky said with enthusiasm.

Students interested in networking are especially welcome. Every October, Brodsky said, the E.D.D.A. holds their Annual Taste Show in New York City for supermarket buyers. The E.D.D.A. recruitment brochure promotes the event, stating, "This annual exposition is the showcasing each year of the new products and new ideas that influence the course of the dairy-deli world for the coming year." That is the professional perspective. The real experience, according to Brodsky, is "a total blast. Basically you just go around meeting people and pigging out all day."

This taste show is not the only food-fest for networkers who love to stuff their faces and rub elbows with potential employers. There is also the New York State Food Merchants Taste Show each fall. Brodsky said she has gone for the past two years. The setup is the same as the E.D.D.A. taste show, and hundreds of vendors come to show their wares.

She said that Cornell has one of the top food industry programs in the country. "It's an excellent contact," she said, "because when you introduce yourself at one of those taste shows, people are interested when you say you're from Cornell.

"Now that I've seen what happens to a product when it goes from a marketing meeting to the shelves," Brodsky said, "I want to see what happens before that. I'm interested in knowing how a product idea gets that far in the first place."

The internship program is available to the classes of 1989 and 1990. Interested students should contact Sy Goldstein at (516) 487-4640 now.

by Glen P. Shannon '88
While one out of three chickens in your supermarket is probably contaminated with Salmonella, there's no need to cut poultry from your menu. According to a Cornell food scientist, the most effective way to prevent food poisoning is simply to handle the meat properly before it reaches the table.

"There are facts about Salmonella and there are misconceptions as to how these facts affect consumers," said Joe M. Regenstein BA '65, MS '66, professor of food science in the College of Agriculture and Life Sciences. One fact that the poultry industry readily acknowledges is that approximately thirty-five percent of chickens on the market today are technically infected with Salmonella. But food scientists also generally believe that the number of Salmonella organisms on so-called contaminated chickens are too low to cause illness. While poultry experts estimate that "infected" chickens host an average of ten Salmonella bacteria, it usually takes at least 10,000 of these organisms to make a healthy adult sick. It may take fewer organisms, perhaps only 1,000, to infect the elderly, the very young and those who are immunocompromised (those who are ill or taking antibiotics). But even these groups should not be at risk as long as the bird is handled properly.

Of greater concern is that those few organisms can take up residence in any other food they come in contact with—and thrive if the temperature is right. Consequently, the key to minimizing the risk of food poisoning is to avoid this cross-contamination. One example of the transfer of the bacteria, Regenstein said, is the "cutting board connection."

Cooks often use wooden cutting boards to prepare raw poultry, he said. If salad ingredients are then chopped, sliced and diced on the same board without washing it first, any Salmonella left on the cutting board from the chicken will be transferred to the salad.

Unlike other foods, salads are often left out at room temperature before the meal. Consequently, Salmonella that would have been slowed down by refrigeration or killed in the oven, thrive on the relatively balmy temperature of the average dining room. This seemingly innocuous salad, therefore, has become a source of food poisoning.

Why these lapses in standard operating kitchen procedure? Regenstein attributes them to changes in the public's perspective toward food safety.

"We have become so worried about additives and chemicals that might harm us in 40 years, we've forgotten to practice basic sanitation in the kitchen in the meantime."

To protect yourself from Salmonella food poisoning, Regenstein suggests:

1) Assume every chicken is contaminated and handle it accordingly, just as you assume all raw pork has trichinosis.

2) Always defrost poultry in the refrigerator or under running water. Defrosting at room temperature gives any Salmonella ample opportunity to multiply.

3) Do not use wooden cutting boards because they are extremely difficult to clean properly. Regenstein uses a Corning Pyrex board instead.

4) Make sure the bird is cooked until the internal temperature is at least 180 degrees F. This guarantees that all Salmonella will be killed.

5) Thoroughly wash all items and surfaces that come in contact with the raw meat, including platters, knives and counters.

But following these practices at home does not protect you when you eat out. Restaurant kitchen procedures vary as much as home practices do. The general rule of thumb whether dining out or cooking in a dorm, he said, is to demand that hot foods are always hot and cold foods are always cold. (Be particularly suspicious of salads kept at room temperature.)

In all, Regenstein said, common sense is the most important element in controlling Salmonella infections in the kitchen. "You wouldn't think of putting milk on the kitchen counter for hours and drinking it later. Similarly, the consumer must follow good sanitary practices when handling chicken." ☐

by Amy D. Crawford '88

STOPPING SALMONELLA
"The department is close to 'choking on its success'" was the conclusion reached by a special team from the Cooperative State Research Service which reviewed the program of the Department of Communication less than a year ago. "Like with other communication programs around the country, the department is experiencing increased demand from students interested in communication careers. Unlike many other programs, however, the department is shouldering a heavy burden of 'service' courses for the college and university," stated the review.

With each passing semester most communication majors in the College of Agriculture and Life Sciences find it increasingly difficult to enroll in their required courses for graduation. No longer does preregistration guarantee majors the courses they signed up for in the department. Nonmajors are becoming a rarity and Grand Course Exchange a nightmare.

"There are two things increasing enrollment in the department," said Department of Communication Chairman Royal Colle. "The number of majors has risen and could continue to increase if we let it," he said. Nonmajors who want to register in communication courses is the second factor affecting enrollment, said Colle. Some departments in the College require their majors to take communication courses for graduation, he said. "We are in an information age. We get people from all over," Colle added.

Some nonmajors preregister for communication courses and have them appear on their schedules at registration only to lose the courses after the semester begins. "They cut me after a week because there were both senior communication majors and nonmajors on the wait list," said Anne Van Lieshout '89, an agricultural economics major. "I wanted to take Organizational Writing because it does relate quite a bit to business, and I thought junior year would be the perfect time to take it."

The increased department enrollment has added pressure to a faculty which has not changed significantly in size during the recent past. "We have more people than we can handle in our courses," said Colle. This number creates a second problem as the advisees per faculty member ratio continues to increase with the growth of the department, he said. "I don't think it's affected the students yet because the faculty has put out extra effort to do the job."

Originally, the Department of Communication limited its size by using the criterion that no advisor would have more than 20 advisees, said Brian Earle, the Undergraduate Program and Advising Coordinator for the department. Until recently, this standard was used to control growth. "During the last two years that was not the factor that was most important in limiting growth. The most important factor was size of class," he said.

Writing classes should only have a class size of 20 to 25 students, said Earle. "We ran out of space in these classes before the advisor limit was met," he said. For the past two years, the department entered the Grand Course Exchange with all but the largest of its classes filled, he said. More sections have been added to specific courses to accommodate more students. These time slots sometimes conflict with other required courses and few students can take advantage of them, according to Earle. "Scheduling is a far more complex process than people realize. We're just starting to understand the complexity of the process," he said.

According to Colle, enrollment is "at the place where we are over what is ideal but we are still able to cope." Competition in the department for space among potential communication majors is becoming intense. "We turn away students for this program who otherwise meet the standards of the College of Agriculture and Life Sciences," said Colle.

The Department of Communication has seen a significant increase in freshman applications for admission, said Assistant Coordinator of Admissions Susan Miller. "We're holding even at the amount of freshmen allowed to enter into communication," said Miller. In 1985, the number of applications to the department was 291 with 89 letters of acceptance issued and 58 students entering the major, she said. The following year, the number of applications jumped to 412 with 88 acceptances issued and 56 students choosing to become part of the department. This number of applications has remained steady in 1987 and 1988 with 421 and 408 applicants, respectively. Admissions has also been asked by the department to cut back on the number of transfer students. Miller added.

After agricultural economics and biological sciences, communication is the most competitive department in the
College with a freshman acceptance rate of roughly 20 percent of the applicants reviewed by admissions in 1987, said Earle. The overall College rate of acceptance is about 30 percent, he said.

Freshman admission into the department is not the only area in which competition is keen. As interest with students already enrolled in the College grew, a policy was put into effect three years ago to raise the admissions standard within the department; thereby, making it more difficult for students to transfer internally. "We've established an internal transfer process to help control the numbers entering the department," said Earle. An example, "Before if an ag ec major wanted to become a communication major, he just went to a faculty member and asked to be taken on as an advisee. They worked his schedule out, and he was in," he explained. "It's hard to say how effective the process has been, but the quality of the internal transfer has risen."

Andrea Fierro '89, originally a student in the animal science program, decided at the end of her freshman year she wanted more of a journalism background. Fierro began talking with Colle in the fall of her sophomore year about admittance into the department. After two semesters of trying to maintain the necessary grade point average, Fierro's formal petition was finally accepted. "It's funny. Now that I am finally in the department, I only have one more course to take before I can graduate as a communication major," she said.

Freshmen and transfers provide increasing pressure on the department and faculty, said Colle. "We have to be concerned with transfers from other institutions as well as internal transfers," he said. "We're caught in a dilemma. How do we satisfy all those students who are majors and want to have communication courses and at the same time, insure that all have a high quality educational experience in those courses? We also want to have our faculty do the research that contributes to the discipline as well as to the academic program."

With the greater demands increased enrollment has placed on the faculty, research is becoming more difficult to perform, said Colle. "Research is very tied with teaching and scholarship. Potentially, we are damaging the teaching program if we don't allow time for research," he said. "There's a balance we have to strike."

This balance will come with both short and long-term planning. Before the beginning of this semester, the department was able to foresee problem areas from the preregistration numbers, said Colle. "We identified some outstanding community people who could help us teach these courses at the level of quality we think essential," he said. "That is only a short-term solution."

"The long-term solution is to work closely with the administration of the College to reach a decision on balancing the number of students with the number of faculty," said Colle. "We have to be able to learn from our experiences and build the solution into our standard budget in terms of personnel and materials. That is so we don't run from crisis to crisis," he said. "The real constraint on the department is the budget because the Dean is faced with a state budget that does not allow him a great deal of latitude for new positions," said Colle.

Overall, there are two basic solutions to the problem of increasing enrollment in the Department of Communication, according to Colle. "We either need long-term anticipation of staff and materials, or we need to put a more severe cap on the number of people we allow in," Colle said. "We've been active in persuading people that organized, systematic, and skillful communication is vitally important in most enterprises," he said. "Everybody needs communications, and everybody seems to be taking us up on it. We would be willing to expand given the right resources."

For now, preregistration still is no guarantee that students will actually be registered the following semester for that course they wanted to take in the Department of Communication. Non-majors will remain scarce in some courses, and the long lines at Grand Course Exchange with the answer "Closed out" at the end of the wait will not disappear in the near future. Looking on the brighter side, the Department of Communication realizes it is "choking on its success" and has identified the problem areas, remaining sympathetic to both students and faculty. As long as they keep the lines of communication open, a solution is close at hand. 

by Janice M. Viveiros '89
Red Mittens and Classical Music

by Guy Leach '88

Most people would agree that red mittens and classical music are a poor substitute for a mother’s affection. Researchers at Cornell University have found, however, that chickens raised with these surrogate mothers grow faster and have lower mortality rates than those raised under more traditional conditions.

Animal physiologist Gadi Gvaryahu conducted the research as part of a larger University study by Professor Dan Cunningham and Professor Ari van Tienhoven. Gvaryahu is a postdoctoral fellow at Cornell under the sponsorship of the U.S. - Israel Binational Agricultural Research and Development Fund.

Playing a recording of Vivaldi's "Four Seasons", Gvaryahu exposed the chicks to music from the day they were born until they were seven or eight weeks old. In addition to the music speaker, he also placed several mittens in the pen for the chicks to imprint on and installed infrared lamps to keep them warm.

These "environmental enrichment" factors helped these chickens outgrow chickens raised in a normal control group. "The body weight increased by about two percent on the average and three percent for males, as compared with control animals," Gvaryahu said. "But the real important thing was the increased feed conversion ratios of the experimental birds." Although the test birds ate more feed than the control group, they also gained relatively more weight from that feed.

Gvaryahu also said that the experimental group of chickens was less fearful and nervous than the control group, which helped increase their growth rates. He attributes much of their improvement to the classical music. The chicks reacted differently to various kinds of music. "While soft music enhanced the chicks' growth, loud music would have an opposite effect," Gvaryahu explained. "Vivaldi's work is just about right in terms of dynamics, rhythm and quality of sound. Chickens seem to like classical music better than rock."

According to Gvaryahu, the music not only aids in keeping chickens relaxed, but can also help farmers control their spacing throughout the pen.

"The important thing was that music and imprinting objects have a commercial application for poultry production," he concluded. □
City trees have it tough, what with all the environmental stresses they must endure. Every day these trees are exposed to smog from smokestacks, trash from litterers, fumes from car exhausts - the list goes on and on. Because of these bad urban conditions, city trees don't look very healthy or live very long. Nina Bassuk, an associate professor of plant physiology at the College of Agriculture and Life Sciences has proposed a few new ways to increase the lifespan and enhance the beauty of city trees.

In big cities around the world, trees are planted in confined spaces—square pits enclosed by slabs of concrete. Bassuk studied 20 New York City street trees from the summer of 1983 through the summer of 1985 and found that not only do these confined spaces limit growth but that the city environment often creates desert-like conditions.

The trees are subjected to heat reflected off and radiated from buildings, concrete, and parked cars. This excessive heat causes the trees to lose water from their leaves faster than it can be replenished from the ground.

At other times, however, there is too much water due to poor drainage systems. If the water isn't properly drained from the soil the pits may become flooded. This flooding can starve the trees' roots of oxygen.

Getting the right amount of water seems to be a major problem for these trees. "What we have is a feast or famine situation as regards to water," Bassuk claimed. But, there are other harsh conditions that these trees must face, including recklessly-parked cars and bicycle locks.

Because of these adverse environmental conditions, trees usually live no longer than ten years in a big city. And these short-lived trees have proven to be quite an expense. According to Bassuk, about 1,000 New York City trees die each year, and it costs $300 to replace each one. This financial burden is also experienced by other big cities around the country, and everyone must pay the price when tax time rolls around.

The question remains: What can be done? Bassuk has come up with several ways to alleviate the problem of stressed city trees. One way is to select trees that are more tolerant of urban conditions. She suggests strong, multi-stemmed, so-called 'weed' trees and shrubs, such as Alder, White Mulberry, and Russian Olive. These bushes may be more tolerant of urban conditions than the traditional "lollipop-shaped" trees.

Another solution is to widen the planting sites for these trees and provide them with better drainage systems. This would give the trees better and more controlled access to much-needed water and oxygen.

Finally, Bassuk strongly suggests planting these trees in groups; a cluster of trees growing together would protect each other from excessive heat and wind.

Bassuk said that city-tree planting has been done the same way for too many years; urban foresters seem to have old planting ideas deeply engrained. But things are changing. "There is a continuing effort to educate foresters and landscape architects through extension education." Bassuk said. Already, progress is being made in some cities as far as specifying different trees for planting, but it will take some time before any changes are visible on the streets.

But, do the people living in the "concrete jungle" really care if there are beautiful trees lining the streets of Manhattan? Bassuk thinks so. "People in the city do care, because open areas are much more precious to them than to people who see acres of forests each day. People everywhere deserve a good environment, and these trees help to create one."
For Argument's Sake

The success of Cornell's Forensics Society is one contention not open to debate. Recent evidence in support of this claim was the third annual Russell D. Martin Forensics tournament hosted by Cornell. The tournament, named after Professor Martin in recognition of his commitment to the forensics program, was attended on February 19-21 by more than thirty colleges from across the country, including Duke University and the University of Oregon.

Pamela Stepp, Director of Forensics, saw this competition as "a good opportunity to have our new people and beginners compete." Experienced debaters and speakers were instrumental in the running of the tournament, but they did not compete-to the relief of many of the other teams.

"We crush in debate and speech," explained Stepp. "Some teams get sick of Cornell." The Cross Examination Debate Association (CEDA) team at Cornell is currently ranked second in the nation. Although Individual Events teams have yet to be ranked, Stepp described the Cornell speakers in this category as "the best ever."

What is the strength of Cornell's team? "Students trust each other," replied Stepp. "I give students a lot of responsibility, and I guess that is why they think that I trust them. Cornell students are also competitive hard workers." The Cornell Forensics Society has at least two national champions: debater David Topol '88 and Individual Events speaker Cam Jones '89. Topol is currently the President of Delta Sigma Rho—Tau Kappa Alpha Honorary Speech and Debate Society, and Student Director of Forensics. Jones is President of the National Forensics Association and President of Individual Events at Cornell.

Forensics at Cornell has enjoyed increasing popularity since 1980 when the team was defunct. With the help of Stepp, the Cornell Administration, the Student Finance Commission and alumni, the team has received the support it needs to back up student interest. This year Cornell alumni contributed over $17,000, money which helped send students to debates across the country. In addition, the agriculture college finances five coaches for the more than 100 team members.

This year the Cornell Forensics Society has also become involved in community service. They recently delivered speeches at seven area nursing homes, and debated for high schools and for the American Association of University Women in Corning, New York.

"Using debate to amuse and entertain helps keep debate in a real-world perspective," commented Topol. William Baker, coach of the team, added, "The team is big enough now that we can start giving back to the community." Baker, who deferred his entrance to law school in order to coach the team, said it was mainly the student interest in debate which kept him at Cornell.

"The number of people we send out weekly is an indication of the students' interest, and that is enough reason for me to stay."

Perhaps the greatest element of Cornell forensics is the spirit of all involved. At the Towson State competition in the fall of 1987, not only did Cornell take first place at the tournament, but the team also won the spirit award by unanimous vote after attending a party cross dressed—the women wearing the men’s suits, and the men sporting the women’s dresses—all with Burger King antlers on their heads. Topol commented, "We like to think we can win and have fun at the same time."

As hosts of the Russell D. Martin Forensics tournament, Cornell invited its forensics friends to do the same. Stepp said she was pleased with the outcome of the tournament, especially that many teams took home prizes.

"We received a lot of compliments that the tournament had a lot of class," she added. No doubt the judges will vote affirmative on that resolution.

by Marianne Wait '89

A student undergoes cross-examination at the Russell D. Martin Forensics Tournament, hosted by Cornell University.
Ireland in Perspective

You have no freckles and you wear tennis shoes. What does this mean? That you’re an American of course! In Dublin, Ireland, this deduction makes perfect sense. Diane Pytcher ’88, a senior in the College of Agriculture and Life Sciences, sometimes found herself identified by these traits during her semester abroad at the National Institute of Higher Education (NIHE) in Dublin. Pytcher lived with an Irish family in Dublin. She found this to be quite a change from dorm life, adjusting to things like “calling if I wasn’t coming home for dinner.”

One of the hardest parts of adjusting to Irish culture for Pytcher was understanding some of the thicker accents. “Some of the people’s accents were really hard to understand. The words and speech patterns were so different.”

Pytcher found the food somewhat stereotypical. “My host mother was really into potatoes. She would bring out mounds of french fries ‘chips’ plus boiled potatoes and mashed potatoes. There would be three kinds of potatoes, total starch. I ate a lot of McDonalds and Burger King.”

She also found that some of her clothes and accessories were unusual, “No one carried an umbrella, wore turtlenecks or mittens. I guess they’re just used to the damp weather.”

In her classes at NIHE, Pytcher found she did not get to interact with Irish students much. The classes she took had mainly American exchange students and were not as technically oriented as the Irish students’ classes. Although the school was small, around 2,000 students, professors from other colleges such as Trinity and University College Dublin came to lecture. Pytcher said “It seemed like the professors (from other colleges) came to meet American students. They were really interested in us.” There were about 30 other Americans from universities all around the United States on the program.

One of the courses Pytcher took was Media and Irish Culture in which she learned how the Irish are portrayed in media and which portrayals are good and bad. “The first day of class we had to list everything we knew about Ireland. Everyone wrote ‘green’, ‘leprechaun’, and ‘shamrock’. A few weeks later we realized how untrue it all was!” She watched films and examined corporate brochures that portrayed Ireland more accurately.

Overall, Pytcher found the classes had a looser structure. She felt confused at first without set textbook lists. She found that “The professors wanted us to discover things, select what we were most interested in and discuss it.”

Enjoying three day weekends every week, Pytcher travelled around much of Ireland. She visited Killarney and Dingle in the southwest. In Sligo she saw the poet William Butler Yeats’ grave and the countryside he wrote about. As part of a class entitled Perspectives on Problems in Northern Ireland, she travelled to Belfast and Londonderry.

“Northern Ireland was the most interesting trip for me. I’ve never been in a situation like that—we saw British officers with guns.” In Belfast they met with Ulster Defense Association members (a para-militaristic group). Her group also exchanged a heated discussion with some civil service officers from Stormount. While she was in a shop in Londonderry a bomb siren went off. “No one moved; they didn’t even care. They’re so used to it. I went out an emergency exit and right outside were three British officers standing there with machine guns—I wanted to go back to Dublin where I felt safe.”

When she needed a break from immersion in Irish culture, Pytcher found other exchange students on the program a help. “It was a relief to be with Americans sometimes so we could talk about what was bothering us. We could joke about things and laugh it off.”

Summarizing what she got out of the experience, one of the first things to come to Pytcher’s mind is the appreciation she feels for home. “I really learned to appreciate my country. I never had any idea how high the standard of living is here. I also had to defend my country because not everyone loves Americans. They think we are just there to spend money and use our credit cards.”

Some of the differences she notes however, is that Irish students are more politically aware and politically concerned. “You feel more in the center, really involved in things. Here you just see it on the television.”

Pytcher found that once she got on a one-on-one level with Irish students there were more similarities than differences. “If you just put politics on the back burner and take time to joke around, they are the same.”

by Robin Barker ’88
When Kenneth Wing '58, MEd '60, PhD '66 was a student at Cornell, he thought the greenhouses adjacent to the Plant Science building looked old. Thirty years later, Wing, now Associate Dean of the College of Agriculture and Life Sciences, said they haven't changed. So, together with a committee of faculty and administrators, Wing is heading a major project to advance Cornell into what he calls the plant "science fiction era of biotechnology."

The first step of the project involves razing the five Plant Science greenhouses and the Conservatory and constructing a computerized, energy-efficient growth facility. The new facility will meet the needs of eight plant science departments, with 54 courses and 3,100 students.

The existing greenhouses, built in 1912, cannot adequately control the conditions needed for modern plant research. "We have some very ancient greenhouses, literally falling apart," explained greenhouse supervisor Robert Traphagen. "The controls in them are very poor. To maintain the temperature within eight degrees—you're doing well. In the summertime we lose even that much."

Floriculture Professor Robert W. Langhans MS '54, PhD '56 said complicated gene experiments can be affected by the lack of temperature control. "When you're looking at biotechnology," Langhans said, "environment can make some changes. That's very confusing for some one looking at small differences."

In addition, the inability to control the insect and rodent population in the greenhouses leads to other difficulties. "We've had problems with squirrels and rats," said greenhouse worker Kim Goodwin. "We plant seeds and they dig them up." Recently, a woodchuck took up residence in the piping system underneath one of the greenhouses. "He was in heaven," chuckled Wing. "Every night he'd come out for a salad bar."

By constructing the new greenhouses, Wing hopes to remedy many of these problems. The new facility will be completely computerized, with one sensor monitoring the light, water, temperature and humidity. Traphagen said the current system monitors the conditions independently of each other, wasting a lot of energy. "The steam goes on, so the temperature is a little higher than it should be so the fan comes on to exhaust the heat. By the time the fan turns off, the temperature is cooler so the steam comes on again. The computer would do away with that," said Traphagen. Only a few facilities at Cornell and a few universities in the U.S. have this system.

The structure of the new facility will increase the growing capabilities of the area. Two wide greenhouses will be built on the same site of the present greenhouses and stretch east and west. The wider area will keep the plants away from the cold walls, allowing better temperature control. A new Conservatory will be constructed facing north and south and will continue to house the exotic plant collection.

The committee envisions the Plant Science greenhouses as more of a teaching facility than a research facility. Plans show a basement containing classrooms and high-tech growth rooms. The growth rooms will provide faculty and students more accurately controlled conditions than a greenhouse. "What people who run labs..."
New Idea

have to do is run two or three sets of plants to be sure to have the ideal set of plants—a lot of work, a lot of waste. With a growth room, every day has the same conditions and they’re fairly optimum,” explained Langhans. The waste heat generated from the high intensity growth rooms will be pumped upstairs to help heat the greenhouses, making the facility more energy efficient.

Shaded by Bradfield to the east and a row of oak trees to the south, the current greenhouses are not in the ideal spot for maximum efficiency. But, according to Wing, talk of moving the facility off-campus was dampened by other considerations. “Students should be able to walk from a classroom to a greenhouse and vice versa,” he said.

“And the problem with the cold weather in the winter makes it very difficult to move them [plants] without killing or severely damaging them. Plus a good greenhouse is an attractive addition to a campus environment.”

The committee is still debating where to put the plants during construction. Suggestions include erecting temporary greenhouses to building permanent greenhouses that could be reused.

The new addition to the campus is expected to cost about $3 to 5 million. The University will receive $500,000 to plan the construction, provided the State University of New York lifts the 12-year-old ceiling for construction borrowing. With the program plan already in the hands of the state officials, the committee hopes to start detailed planning in April, 1988. Wing projects it will take one year for planning and one and a half years for construction.

After the facility is completed, the committee plans to look at all the plant growth facilities the agriculture college will need over the next 20 years. The plans include the Wing greenhouses at the east end of Tower Road and the Guterman facility off-campus. “I see the Plant Science greenhouses as primarily a teaching facility. The others will be primarily research, with very high-tech facilities so we can have exactly the environmental conditions that plant or set of plants needs for a certain kind of research,” Wing said.

He added that the project could take up to ten years to complete and could cost $15 to $25 million.

Cornell’s plant science department is the number one in the nation, with over 500 plant scientists, including graduate students, research associates and faculty, doing research. Administrators, faculty and staff agree that the renovation of the greenhouse is a project long overdue. “Plants are very much a part of life,” observed Wing. “With the strength of Cornell and the College of Agriculture and Life Sciences and the plant science departments, it’s really important to have a quality greenhouse facility to support that kind of research.”

Langhans agreed. “For all of us, when you’re successful and you grow something that doesn’t die and things work out the way you want them to, you get enthused, so you want to grow more and more. Good conditions will encourage people to do more.”

More practically, Goodwin said about the new facility, “It will be nice, it will be heaven.” Looking around the antiquated Conservatory, she sighed, “This place makes a lot more work.”

by Shu Shu Foo ’88
When Reading Isn't Easy

It did not stop Einstein, Edison or DaVinci, and it is not about to stop Cornelians Paul Boudreau '88 and Carlyse Marshall '89.

All of these people are learning disabled, a catch-all term for a wide array of problems that often involve reading difficulties. Joan Fisher, coordinator of disabled services for the Office of Equal Opportunity, defines a learning disability as "some kind of brain dysfunction. If you think of the brain as a giant computer, a learning disability occurs when one or more of the wires get out of kilter and interfere with the successful performance of visual, auditory, perceptual or cognitive skills," she said. "There are dozens of varieties of learning disabilities and their effects on people are as individual as the people themselves."

Paul Boudreau found out he had dyslexia in second grade. Dyslexia is a learning disability most famous for causing those who have it to transpose letters, words and numbers. He calls himself a classic dyslexic because he is male and left handed. Also fairly typically, Boudreau, an architecture student, has difficulties with letters and numbers, but has excelled in art.

And it just may have been art that saved Boudreau from complete frustration throughout school. "I've always been good at art. That's what kept me going, I guess," he said. "When a teacher says 'Wow, that's a nice drawing,' you don't mind so much going to school the next day."

Although his architecture classes cause few difficulties, problems often arise in the rest of his curriculum, where reading is key. To compensate, he gets some books on tape from a service primarily for blind people and he takes untimed exams, usually needing 20 to 30 minutes extra.

Marshall uses similar techniques to cope with her learning disability, although she only discovered she had one during her sophomore year of college. As a freshman, Marshall was struggling with engineering, even though she was working long, hard hours on it. A friend from home had just discovered she had a third grade reading level, and suggested that Marshall, too, might have a learning disability.

Marshall decided to get tested, and was diagnosed as having mild dyslexia and an audio/visual perceptual problem. She experiences a time lag between when she hears or sees something and when her brain understands it. Auditory functions are primarily a problem only when she hears something strange—like when she took Russian. "I would have to hear things three times before I really heard it," she said. "It's like it goes right through me, and all I hear is sound."

She is now a government and Soviet studies major. After an initial "Why me?" reaction, she began to use many of the techniques Boudreau does to cope. They both also make use of notetakers, readers and a peer support group arranged by the OEO.

In eight semesters of college, Boudreau, who is a transfer student, has had only one professor who did not understand about his disability and would not help him compensate and that was not at Cornell. To most professors, he just explains that "if it seems unfair that I get to take the exam differently than everyone else in the class, it is also unfair that I am forced to learn in a way that is not sufficient for me to learn as best I can and get the best education I can."

Marshall, too, has had mostly positive experiences in explaining her specific needs to professors. One professor even offered her an extra session each week to discuss the readings, and one professor confided that he, too, had a learning disability.

Boudreau sometimes returns to his Massachusetts high school to speak with learning disabled students. He encourages them in their goals and emphasizes that hiding a disability is a big mistake. "If your professors don't know you are learning disabled and you get into academic trouble, it'll be a lot harder to get out."

About five percent of the population suffers from a learning disability, Fisher said, which translates into about one person in every classroom across the country. Typically, a person with a learning disability has average or above-average intelligence—their problems are definitely learning disabilities, not learning disabilities, Fisher said.

This year the OEO has 30 Cornelians on record as learning disabled, but the number of learning disabled students on campus probably exceeds that number, she added.

"You can never get rid of what you have," Boudreau said. "But you can develop skills to cope. It takes a lot of motivation," he added. "You have to stand up for your rights."

"My grades have been good so far [in government] so I can't really complain," Marshall said. "But, I also happen to be very stubborn."

Boudreau speaks proudly of the accomplished people who were or are also learning disabled: Tom Cruise, Agatha Christie, Hans Christian Andersen, Woodrow Wilson and Nelson Rockefeller, among others. "When I hear those names, I don't feel hesitant to say, 'Hey, I'm dyslexic.' It's nothing to be ashamed of."

by Colleen Kaplin '89
Practicing
the
Profession

The Veterinary Medical Teaching Hospital of Cornell University teaches students the veterinary profession inside the classroom and on the job. The two facets of the teaching hospital are mutually beneficial. As Dr. Robert Playter, Director of the Teaching Hospital said, "There would be no hospital if it were not for our teaching mandate."

Both the small animal and large animal veterinary clinics of Cornell provide a wide range of veterinary services that are more specialized than those typically offered by a private veterinary clinic.

The small animal clinic tends to nearly 12,500 companion animals per year, mainly dogs, cats and birds, according to Playter. The large animal clinic treats over 2,400 animals per year, including horses, pigs, sheep, goats and cattle. The clinic treats all domestic species and some wild animals, including various snakes and reptiles, owls, hawks and other wild birds. The clinic even treats a few llamas. Playter said they are "sort of a status symbol now."

A major part of the hospital's work is to provide an ambulatory service for the area. A hospital clinician and a group of students, using a vehicle stocked with special equipment, travel into the countryside around Ithaca to make "house calls." The field service will visit a farm by request of the owner, either for a single animal or an entire herd. The ambulatory service covers a 20 mile radius outside of Ithaca and treats over 40,000 animals per year, said Playter.

One of the most recent technologies being used in the teaching hospital is a new high speed treadmill for performance testing in horses. Although the treadmill project is only a few months old at Cornell, universities such as Tufts, Kansas State and University of Pennsylvania have made progress working with treadmills. While the treadmill is used primarily for research now, Playter said that it will eventually be used for client animals. An appropriate facility and full management plan must be devised before the treadmill can be put into extensive use.

The Cornell veterinary clinics also offer a variety of ultrasound tests. Ultrasound is an imaging process which uses sound waves instead of x-rays to examine bones and soft tissue. By visualizing different densities in tissue, the ultrasound test lets doctors examine structures and actions of the heart and other internal organs. As in hard tissues, the point of a fracture in bone would be less dense than surrounding points. The ultrasound provides this picture for the clinicians.

Along with a wide range of services and a large inventory of specialized equipment, the Cornell veterinary hospital has trained specialists in the areas of dermatology, ophthalmology, neurology, internal medicine and surgery. While the extent of service and specialization sets the teaching hospital apart from private practices, most similar teaching hospitals across the country offer a variety of specialized services.

With many specialists and a large practice, seniors at the college can gain hands-on experience with cases in both the small animal and large animal clinics and during trips into the field. Whole semesters worth of classroom work and study of clinical techniques build up and eventually culminate in the senior year when students gain practical experience while under the close supervision of faculty members. From the class of 1987, Donald Bruno, pictured above, examines a patient during his rotation in the small animal clinic.

With a total enrollment of 317 students for the spring 1988 semester, Marcia Sawyer, Director of Student Affairs and Admissions, notes that 135 of the 150 Cornell graduates in the school are students from the College of Agriculture and Life Sciences.

Plans for two new buildings are underway. The buildings will contain an entirely new small animal clinic, an addition to the large animal clinic, a research section and an academic section. Construction should begin in the next two years and be completed in five years. With the prospect of future growth and two comprehensive new buildings plus a solid clinical and academic reputation, the training hospital at Cornell has a lot to look forward to.
Some farmers have more serious problems than suppressed crop prices and the rising cost of technology. Agriculture ranks neck and neck with mining as the most dangerous industry in terms of the rate of fatal accidents on the job, according to a Cornell University safety specialist.

Across the nation, farm accidents killed some 1,700 workers in 1986 and were responsible for more than 170,000 disabling injuries, said John G. Pollock, a Cornell Cooperative Extension safety engineer in the New York State College of Agriculture and Life Sciences.

In New York state alone, farm accidents have killed more than 100 people over the past four years. In addition to these deaths are countless debilitating injuries to the state's agricultural work force. "There is no one in New York state who keeps tabs on farm accidents, but my best estimate is that as many as 10,000 severe accidents occur annually in the state," said Pollock.

What's being done to prevent this carnage on America's farmlands? In late October of 1987, Cornell University and an independent agency mounted a major effort to reduce farming accidents which have made agriculture the state's most dangerous industry. Members of the New York State Rural Health and Safety Council (RHSC) agreed to work mutually with the College of Agriculture and Life Sciences in the funding, planning and implementation of a program to promote rural safety.

The RHSC is a non-profit corporation whose members, besides Cornell, include agricultural organizations and cooperatives, medical professionals, farm suppliers and insurance companies as well as individual farmers. The new program will include expanded statewide education and training of farm workers.

"We will help farmers to analyze the risk of undertaking certain chores, so that they can make better decisions about farm operations from a safety standpoint," said Pollock. "We will also train farmers in steps to take if they're first on the scene of a grain-bin accident, a tractor overturn, an electrocution or other mishap." Besides accident prevention, the RHSC also will promote training and education to improve health practices in rural areas, added Pollock.

With a severe farm-related injury occurring in one farm out of four in New York each year, the necessity and timeliness of this program is evident. The total costs from the lost time and medical expenses resulting from these mishaps is about $3 million a year, Pollock said.

The rural safety program, which was implemented on January 1, 1988, is being spearheaded by Pollock who just recently received approval to fill his staffing positions. The staff, which will consist of four safety specialists and one support member (Pollock refused to label the support member a "secretary" for "the responsibilities of the position will far outweigh those of a secretary"), will be spread across the state to provide regional responsiveness to the needs of New York's farmers.

Two of the four specialists will monitor the central area of New York from an Ithaca base, while the other two will set up home bases in eastern and western areas of the state. "My best guess is that we will have the entire staff assembled by mid-April," said Pollock.

Until the staff is together, Pollock will be busy organizing and writing a safety information-packed newsletter cleverly called the "RHSC Manager" (pronounced "risk manager"). Article titles of the special kickoff issue of 1987 included: "Tractor Lighting Adds to Safe Travel on Rural Roads," "Exercises to Save Your Back," "All-Terrain Vehicles Are Not Toys" and "Young Farm Workers More Frequently Injured on the Farm." Pollock plans to send the quarterly newsletter to as many New York farmers and farm workers as he can get on his mailing list.

Pollock is quite excited about the program's ability to monitor farm accidents more closely and hopes to ultimately see a lower rate of fatalities among farm workers in New York state. According to a study done by the National Safety Council, agricultural workers suffer 52 fatalities per 100,000 workers as compared to the fatality rate of all other industries combined which is 10 per 100,000 workers.

Do farmers get back to Pollock to thank him for his life-saving tips? "Over the past five to six years, I've never had somebody come up to me and tell me that one of my tips has saved their lives—I can only hope that the farmer can use my teachings in a way so that he places himself in a less risky work environment which will ultimately lead to less accidents."

In the rural safety business, Cornell's John Pollock knows that no news is sometimes the best news. 

by Joe Lizzio '88
Weeden Named Associate Professor

Dr. Norman F. Weeden of Geneva, NY, has been named an associate professor at Cornell University's NYS Agricultural Experiment Station. Weeden, who joined the Geneva station in 1982, has done considerable research into the basic biochemical and genetic differences between related fruits and vegetables. He has also published numerous articles and books on this subject.

The network, which was conceived by Cornell for farmers with financial problems, has received more than 1,800 calls since it began in March 1986. Half of the phone calls involve financial questions, but the service also fields requests for help with legal problems and job training.

NY FarmNet refers problems that cannot be solved over the phone to a statewide network of Cooperative Extension agents, farm financial counselors and other personnel who operate in every county of the state.

NY FarmNet Honored

NY FARMNET, an information and referral service for New York state farmers, was honored in January by the Cornell Lambda chapter of Epsilon Sigma Phi, a national service fraternity of Cooperative Extension workers.

Currently, Weeden is faculty advisor for the Cornell Laboratory for Ecology and Evolutionary Genetics. He received a joint appointment to the faculty of Bailey Hortorium and to the Department of Horticultural Sciences Seed Laboratory Advisory Committee.

Weeden earned his Ph.D in genetics from the University of California-Davis.

Farming Alternatives Conference Held

The Cornell Farming Alternatives Project co-sponsored a conference that was held in Ithaca March 2 and 3, 1988. The conference highlighted unusual farm enterprises and proposed strategies to promote agricultural innovation and diversification in New York state.

Top agriculture officials from New York state and Massachusetts were among the featured speakers; they compared the agriculture and market developments of each state.

Also presented during the two-day conference were three successful farming entrepreneurs who spoke at the opening sessions. The speakers were Josef von Kerekkenick of Chau- mont, NY, who raises European fallow deer for venison; Ann Sepe of Misty Meadow Hog Farm in Romulus, NY, who developed a farm tour business; and Robert Bitz '52 of Plainville Turkey Farm near Baldwinsville, NY, who is developing a fish farm.

The second day's session focused on the priorities for future research, extension and policy development to encourage farming entrepreneurship.

The sponsors were the Farming Alternatives Project at Cornell, the Cornell Agricultural Experiment Station, Cornell Cooperative Extension, New York Farm Bureau, New York State Grange, the New York State Legislative Commission on Rural Resources, the State Department of Agriculture and Markets and the State Office of Rural Affairs.

The conference fulfilled its purpose, said organizer Judy Green, "because the development of new farm products, marketing strategies, service enterprises and production methods is essential to maintaining the vitality of New York's farms and rural communities."
Far above East Hill Plaza stands Cornell's latest achievement in a university-wide campaign to renovate campus athletic facilities: Cornell's brand new Equestrian Center.

"It's a great facility," said Ginny Sirois, the manager of the Equestrian Center, "it's one of the nicest arenas on the east coast."

The Center was built as a solution to the problems associated with the old Oxley polo arena: poor lighting, a leaky ceiling, no turn out for the horses and inadequate facilities in the barn. Sirois explained, "The ceiling at Oxley had been leaking badly and the students had to ride around the puddles."

In contrast, the new Equestrian Center is set on a five-acre plot of land on Pine Tree Road, featuring four outdoor paddocks, indoor and outdoor arenas and parking for horse trailers and spectators. Indoors, the main event is a 250 by 90 foot arena with high ceilings, good lighting, and a warmth and dryness which Oxley can't match.

All 60 horses housed by the Equestrian Center have either 6 by 10 foot straight or 10 by 10 foot box-stalls. All the stalls have been equipped with a new matting which cushions the horses' feet and reduces the amount of sawdust needed in the stalls by one-half.

The barn itself is open and well lit, and comes complete with a barn cleaner, a trough that automatically empties old sawdust and manure out of the barn quickly and easily. The system frees the barn hands to spend more time on the horses. Patrick Andrew '89, co-captain of the Men's Varsity Polo Team, agrees, "This barn is much more efficient to run."

The Equestrian Center, which was officially completed and dedicated on February 20, 1988, is part of a $28.5 million program in which Cornell is renovating all athletic facilities. This is one of the projects funded by the "Capital Campaign for the Athletics Association" which sponsored the renewing of Barton Hall's floors and basketball courts, the revamping of the Kite Hill Tennis Bubble, and the rebuilding of the Schoellkopf Field press box. Diane O'Shaugnessy, the assistant campaign director said, "After funds were raised from private donors, building the polo arena fit into the athletic overhaul schedule for fall 1987 and spring 1988. Now that it's being used, everyone seems to be very pleased."

The polo team and the polo club are two of the many groups who are benefitting from the new arena. The polo team consists of 18 freshmen and 18 varsity men and women who compete in intercollegiate games with colleges from all over the east coast. The men's varsity team has been leading the pack, placing second in the east only to the undefeated University of Virginia, and they expect to go to the University of Texas in April for the Men's National Collegiate Polo tournament. Karen Lowe '90, a women's varsity rider, describes the difference between games at Oxley and the Equestrian Center: "The best part is that now our fans can see. They all have an unobstructed view because the support beams are behind the bleachers."

The Polo Club is a group of students, local horse owners and members of the community who are interested in playing polo but are not on the varsity team. The club practices Wednesday nights, the only week that the varsity team does not use the arena.

Another group which uses the arena and the Cornell lesson horses is the Cornell Equestrian Team. They compete at intercollegiate horse shows around the nation and ride horses supplied by the home team. They practice twice a week at the Center.

When the Polo Club and the Equestrian and Polo Teams are not practicing...

Riding a New Range

by Lisa Ann Pasquale '88
ABOUT THE ISSUE
Happy birthday, Ithaca! In this issue we'll have a look at Ithaca's centennial celebration, and examine some of the changes that these past hundred years have brought Cornell, from the landscape, the coeducational climate and the student government, to research at Cornell and student housing. We'll honor some of Cornell's finest—both old and new noteworthy educators, and analyze a current agricultural controversy.

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Centennial Celebration

"Essentially, the centennial provides Ithaca with a great chance to have a party and to have a good time," commented M.J. Herson, director and producer of Ithaca's Centennial Celebration Opening Night Ceremonies.

On June 1, 1988, Ithaca became a chartered city. 1988 will be devoted to celebrating more that the individual people, the buildings and geography that make up the greater Ithaca area; the celebration will focus on honoring the spirit that makes this community unique.

The idea for celebrating Ithaca's 100th birthday began in March, 1986. Randall Shew, a Cornell lecturer, former managing editor of The Ithaca Journal and retired director of community relations at Cornell, and Robert J. Kane '34, former dean of athletics at Cornell and former president of the U.S. Olympic Committee, co-chair the Centennial Commission, made up of 60 community leaders.

After much deliberation, the commission decided to have not a one-day celebration, but a year-long series of events.

The Centennial Celebration will begin in earnest on April 9, 1988, at 8 p.m. with the opening ceremony in Lynah Rink. The ceremony will feature "100 Minutes of Entertainment," a fast-paced look at different types of entertainment which honors Ithaca personalities that have contributed to the entertainment field. The show opens with a selection by Frank Battisti, a former Ithaca High School teacher who is now Dean of the New England Conservatory of Music, and Leone Buyse, first flute from the Boston Symphony and Boston Pops Orchestra. The other performances range from an Ithaca College Theatre rendition of a "Bye Bye Birdie" number starring former Cornellian Jimmy Smits MFA '82 (of L.A. Law), to a tightrope act by Hannah Kahn, to a local gospel choir, to a black and white Keystone Cop-type movie paying tribute to Ithaca as a silent film production center.

"We anticipate that it will be the perfect way to kick off the year. It will just be a beginning and an introduction to the rest of the year's planned activities," Herson said.

June 1 is Charter Day. A ceremonial signing of the city's charter will introduce a five-day version of the Ithaca Festival, and organizers hope New York State Governor Mario Cuomo will attend. "The Charter Day is Ithaca's actual birthday," said Shew, executive vice chairman of the committee. To honor the occasion, there will be a parade out to Stewart Park for the signing, followed by a barbecue.

The Centennial Commission has also planned the Great Ithaca Write-In on May 17, 1988. Ithacans from every walk of life will be asked to write about their day—what they did and what they were thinking about. The History Committee, chaired by Carol Kammen, developed this idea from a write-in done in China in 1936.

Other events include the Jack K. Kelly Centennial Games in "Celebration of the Lake," a weekend of barbecues, competitions, fireworks and flare-lighting around the lake during the Fourth of July weekend. Later in the year, a Centennial Conference on the Future, a centennial "Evening Out," and a burial of a time capsule during the closing ceremonies on December 31, 1988, have been planned.

Of a proposed $370,000 budget for the celebration, Shew said the group has already received a $30,000 grant from the state, $8,000 from the city, $11,600 from the county and many other substantial contributions from corporations, foundations and individuals. Although revenue from the events probably will cover a small part of the cost, Shew said he is not worried. "If worse comes to worse, we may have to cut back on some of the events," he explained. "But I don't think we'll have to do that."

To raise funds, the commission is running a merchandising campaign in which local stores are selling T-shirts, hats, glassware and other memorabilia with the centennial logo. The commission also has designed one-minute public service announcements called "Centennial Minutes" which are running each weekday throughout the year on local radio stations. Local advertisers have agreed to donate time and facilities for the project.

Susan Johnston, sales manager at radio station WHCU, Lite 97, who has been doing some of the publicity for the Centennial's opening event, said, "WHCU has donated about $15,000 in time for the PSAs. We think they've been a great way of generating public awareness."

The Centennial Celebration won't stop at the city limits, however. "We are celebrating not only the city and its residents," Shew said. "The whole greater Ithaca area is included in our plans." To recognize the community spirit in Ithaca and surrounding towns, a barbecue in Groton, the reconstruction of a bandstand in Dryden, and softball games under the lights at Cass Park will be held. Shew continued, "Mayor Gutenberger will be going into each and every municipality to plant a tree in the town parks in order to recognize the kinship we have with our neighbors."

With all the thorough planning that the Centennial Commission chairpeople and many other Ithacans have put into the Centennial Celebration, it seems unlikely that this year will be anything but a smashing success. "Since a birthday like this only comes around once in a century," Shew smiled, "...we decided to go for it."
Building for the Future

Try to imagine what Cornell will be like 100 years from now. Walking across campus today, students, faculty and visitors alike can not help but notice the variety in architecture and construction of Cornell's buildings. Everywhere one looks, the campus is growing up and spreading out. If Ezra Cornell and Andrew Dickson White were alive today, they would probably be unable to fathom the changes the University has undergone.

One hundred years ago in 1888, Cornell was just a tiny acorn compared to the mighty oak it is today. With only ten buildings and two roads, Cornell had just begun to build for the future. The arts quad, then called the stone quadrangle by former president Andrew Dickson White, comprised the entire university with the exception of Barnes Hall, Sage Chapel, Sage Hall and two barns. It probably never occurred to White that in the future, his home would become Cornell's Center for the Humanities.

The quad was composed of Morrill, White and McGraw halls to the west, Franklin (currently Tjaden) and the west wing of Sibley Hall to the north, and a temporary wooden laboratory building to the east. Faculty homes surrounded the academic buildings.

"Back then, the agriculture college was only two barns and a couple of offices in Morrill Hall," said University Archivist Gould Colman. Although the first building on the ag quad, Roberts Hall, was not constructed until 1906, an 1892 campus map pictures a structure labeled as the "Agriculture Building." This structure was in fact never built. Explained Colman, "No funds were appropriated. The Cornell trustees authorized construction when the necessary funds were saved from federal appropriations under the Hatch Act of 1887. Meanwhile, the fictitious building served to appease critics who claimed that Cornell wasn't doing enough for agricultural instruction."

1888 was a relatively big year for construction at Cornell. Surrounded by much controversy, Lincoln Hall was built to serve as the University's first permanent building for the schools of civil engineering and architecture. Until that time, both schools held classes wherever space was available, but primarily in West Sibley Hall.

The controversy over Lincoln Hall started when it was proposed that the structure be built of brick. A.D. White was reluctant to let a brick building go up on the "stone" quadrangle. This started a lot of squabbling over where Cornell would come up with the extra money to create a stone structure. When sufficient funds were not acquired and the need for class space necessitated speedy construction of the hall, it was finally agreed that the front of the building (which faces into the quad) and the sides would be built of stone and the back would be built of brick. Today, Lincoln Hall serves as the home for the departments of theatre arts and music.

The chemistry department was also demanding more room and better facilities a century ago. At the time, Franklin (Tjaden) Hall was shared by the physics and chemistry departments. Morse Hall was built to provide the needed space. The hall was located next to Franklin, where the Johnson Museum of Art now stands.

Morse Hall too, was the subject of much controversy. Not only was it built of brick (while A.D. White was away from Ithaca), it also was placed on the "sacred promontory" where Ezra Cornell had located the University so that it would look out over the Cayuga Lake and valley landscapes. Because the building was already constructed, White had no recourse but to express his displeasure. Morse Hall was partially destroyed by a chemical fire in 1916 and demolished in 1954.

1888 also was the year that plans were made for the University Library (today's Uris Library) and Boardman Hall, which would serve as the law school. When Boardman was built in 1893, it stood on the site of Olin Library. Overall, the late 1880s and especially 1888 were prosperous years for the Cornell campus.

One hundred years later, Cornell is composed of more than 200 buildings and approximately 15 miles of streets and roads. "The amount of square footage in buildings has grown at the rate of about one percent per year since Cornell was opened in 1865," said Lewis S. Roscoe, director of campus planning. In 1988, 1 percent translates to a little more than 100,000 square feet. "There is currently 12 million
square feet of buildings at Cornell and we are growing all of the time,” he said. Although the amount of construction may appear to go up and down over a few years, I can see no event that will change the 1 percent growth rate.”

And growing we are. “In 1988, there is about $100 million worth of construction in progress and we have about another $100 million already committed to projects that will begin in 1988 and finish within the next few years,” said Harry W. MacPherson, director of construction. Current projects include the Performing Arts Center, Statler Hall and Hotel, Academic I, renovations to the University Halls, the new Biotechnology Center and the restoration of Beebe Lake. In all, there are approximately 15 major projects active right now. “Construction is split about 75 percent new facilities and 25 percent renovations and upgrades,” MacPherson added.

“Cornell is growing not because of increased enrollment, but because of advances in technology ranging from animal science to engineering to physics. There are whole new programs that didn’t exist five years ago,” Roscoe explained.

Upcoming projects that will begin their planning or construction phases in 1988 include the Theory Center, field house, turf replacement on Schoellkopf Field, Campus Store upgrade and renovation and construction at the new Cornell Club and Center in New York City. Most projects today are paid for by donations. “It’s amazing the commitment Cornell alumni have,” MacPherson said.

All Cornell construction projects are handled by the Construction Management Department, which is composed of only 12 people. “Each person serves as a project manager, responsible for two major projects and three or four minor projects each,” MacPherson explained. “Any project for a half million dollars or less is considered small.” The department also hires the services of construction management companies. “The state-supported colleges have their own planning units in Albany,” Roscoe said. “We guide the physical planning at Cornell, but the early planning and definition phases are done in Albany,” he added.

“There’s a shift toward high tech and a revitalization of campus facilities is necessary to bring us into the 21st century,” MacPherson said. “The quality of architects and engineers we use gets higher every year. Some of our architects have international recognition,” he added. Cornell recently won an award for the architecture of the new parking garage and a national design award for the interiors of the renovated University Halls. “Cornell is a world-class university and should have world-class architecture. Different building styles and design make for a more creative environment for students,” said MacPherson. “Construction and planning of a campus in general is a very creative job.”

“All of the construction work we’re doing is necessary,” MacPherson said. “We need to upgrade our facilities to keep us at the forefront of research as well as provide modern facilities for the arts.”

“Not only are we upgrading but also providing good facilities in areas where none ever existed,” said Roscoe, citing the Performing Arts Center as an example. “The largest overall continuing demand is library space over all fields of study, departments and colleges,” he added. Roscoe attributes this demand directly to advances in world-wide book production and advances in the sciences.

“We are currently preparing a campus-wide plan that we will present to the University’s trustees within the next few months,” Roscoe said. “All of the colleges, the graduate school, athletics and housing have master plans that we will synthesize in the campus-wide plan.”

It makes one wonder whether Ezra Cornell and A.D. White could have imagined what the university they were just getting off the ground in 1868 would be like 100 years in the future. What will Cornell look like 100 years from now? One thing is for sure; it will never stop growing.

Morse Hall, located on the scenic spot Ezra Cornell was inspired to build Cornell, burned down in 1916 and was later replaced by the art museum.

Academic I is part of the $100 million worth of construction now in progress.
Though technology is often thought of as a panacea for the world's problems, many times controversy has surrounded scientific innovations. The commercial introduction of bovine somatotropin, a drug used to increase the production efficiency of dairy animals, has produced a backlash of allegations that the growth hormone will actually hurt the dairy industry. Several Cornell researchers continue to support use of the drug, however, and claim that their opponents' criticism is unfounded.

Animal science Professor Dale E. Bauman created bovine somatotropin with genetically engineered microorganisms. "New technology is essential for the farmers to make a living, and for the consumer as well to improve the standard of living," Bauman explained. Studies conducted by Bauman and several of his colleagues show that the hormone boosted the milk production of dairy cows dramatically in a short period of time.

Ironically, in arguments against the hormone, many critics cite a study of its economic impact conducted by Robert J. Kalter, chairperson of the agricultural economics department. Groups such as the Wisconsin Family Farm Defense Fund, the Foundation on Economic Trends, and the Humane Society of the United States have spearheaded efforts to organize opposition to somatotropin. The groups have formed a coalition to convince the Food and Drug Administration to prepare an environmental impact statement on the growth hormone. Their nation-wide petition presented to the FDA states that Kalter's study predicts that "entire dairy communities will be economically and socially devastated by the widespread commercial use of bGH (bovine growth hormone)" and that "within five years, nearly one out of every two dairy farms will be eliminated."

But Kalter said his study has been misrepresented. "They used our economic study to support their claims in such a way that it sounds as if we were making the allegations. We were taken completely out of context. There is nothing in our study that says anything remotely like this."

Kalter pointed out that the number of farms in the U.S. has been continually declining since the industrial revolution. "Over the past two decades the nation has seen a 77 percent decline in the number of dairy farms. This has happened without hormone technology, and the trend is expected to continue regardless of the hormone, although bGH may speed up the process a little."

Opponents of the hormone often focus on the issue of over-production, a very real concern in today's era of government subsidies. Kalter said he thinks the surplus problem can be solved by revamping the government programs which have created and supported over-production. "Surpluses would disappear and milk consumption would increase if we let market forces operate more efficiently," Kalter said.

Bauman calls the petition before the FDA as a "mass distortion of facts." One of its major contentions is that bGH would require farmers to increase the amount of feed they give to the cattle, thereby overworking their land in the name of increased production. "Our results show exactly the opposite effects on total feed requirements," Bauman asserted. "Because of the dramatic increases in efficiency achieved with bGH treatment, the same quantity of milk is produced with less total feed and fewer cows."

The petition also claims that the growth hormone will have many detrimental side effects on the cows, including physiological stress, and diseases like mastitis, crippling lameness, fatty liver disease, and metabolic disorders including ketosis and acetonemia.

But Bauman said there is no scientific evidence to support any of these claims. "We have never observed any health abnormalities or evidence of stress," he explained. "In fact, the dramatic increases that have been observed with bGH treatment would never have occurred if cows were unhealthy or stressed in any way."

Many dairy farmers who have used the hormone would like to see it on the market. Dairy Herd Management reported that Tom Craig, a dairy farmer in central Pennsylvania, made a successful trial of bovine somatotropin on his farm. "The trial gave me the opportunity to see that if the technology's available I'll be the first one to adopt it," he told the magazine. "There's nothing that would prevent me from using it."

Not all farmers are convinced, however. Small farm owner Fred Dutrow fears that the hormone's introduction might drive him out of business. "I'm not sure this isn't just a case of the rich getting richer," he told Dairy Herd Management. "If the large farms start producing more milk I think a lot of small farmers will be pushed out."

by Guy Leach '88
Could an ominous-looking tarantula be nesting in your coat pocket? Does a parrot give you wake up calls at seven a.m.? Or has a large python been lurking in your bathtub? Boa constrictors, pythons, iguanas, parrots, tarantulas and oscars are not banished to unknown corners of the world. There are a number of exotic pets, alive and well and living in Ithaca.

When the Ithaca weather turns warm, Chris DeMango '89, a natural resources major in the College of Agriculture and Life Sciences, totes an eight and a half foot python around his neck. Enjoying the spring sunshine, DeMango and friend often relax together on the arts quad.

In his Ithaca apartment, DeMango cares for his python, Nemesis, a savanna monitor named “puppy” (a large lizard, that when grown, will be capable of being quite a formidable predator according to DeMango), and an iguana named Grig who enjoys snacking on hibiscus blossoms, avocado and tofu, two oscars, or large carnivorous fish, a ferret and a number of rats. So you see, the range of house pets extends far beyond dogs, cats and goldfish.

Education is the cure for myths and misinformation leading to the mistreatment of these creatures. According to DeMango, because his animals have been raised with a lot of attention in an environment full of people, they are well adjusted, docile pets.

While all of his animals live in their own climate controlled tanks, they all have a recess period when “everyone gets to roam around the apartment” for an hour a day. Within the microcosm of the apartment, DeMango said the ferret is “the troublemaker.”

DeMango’s devotion also means his pets get daily baths and can bask in the tropical stage of ultraviolet light. How would you enjoy sharing your bathtub or beach towel with a lizard?

DeMango said Nemesis could reach 20 feet and 300 pounds, proportions which could make toting him around campus a feat of magic. As for the oscars, DeMango said they recognize people who approach the tank and will jump up to get food from DeMango’s hand. His chartreuse iguana, on the other hand, is often mistaken for a statue on his kitchen counter—until he moves.

DeMango is not the only Ithacan sharing his space with exotic pets. Mike Kraut '88, also a natural resources major in the ag college, is a licensed wildlife rehabilitator for the state of New York. Injured hawks, owls, baby raccoons and the like often get sent to Kraut for treatment.

Kraut is a licensed falconer, one who uses hawks to hunt rabbit and squirrel. When he released his hawk before coming to Cornell, he filled the gap with a cockatiel. His array of pet birds has expanded since then. Now, Kraut keeps a blue and gold macaw and a blue fronted amazon parrot, but, as a freshman living in Clara Dickson, he had a macaw, a cockatiel, a parrot and two cockatoos sharing his single.

Kraut’s parrot commonly screeched “Wake up! Wake up! Wake up!” at the sound of an alarm clock. This bird routinely sent innocent bystanders running to their phones with his imitation of a phone ringing. Upon reaching the phone, they would hear the parrot’s “Hello. Hello.”

Luckily, DeMango and Kraut have been able to juggle the responsibilities of studying and caring for their unusual pets. They have also been fortunate enough to find housing which allows the animals. This is not always the case. Some students cannot care for an animal properly, or leave it careless-ly behind when they must move on.

Jane Hunsberger, a maintenance and service person at Cornell, happened upon her pet boa constrictor named Jezebel. Jezebel was living in the walls and heating ducts of the house in which she had been abandoned. When the heaters shut down, the snake went to bask in the sunshine on the windowsill where Hunsberger found her. Hunsberger adopted the starving and dehydrated snake. Now six foot Jezebel is a docile house pet which Hunsberger described as “warm and cuddly,” like “a cat with no legs.”

During the summer, Hunsberger lets Jezebel outside to climb in the trees, where her cats enjoy chasing the snake.

Hunsberger also has a tarantula which she rescued from a pet store window. She said that tarantulas’ reputations exceed their degree of harmfulness. Hunsberger’s tarantula escaped from its tank and was loose in her apartment for two months during the summer. Though she said they are not deadly to humans, she admitted it is a relief knowing the tarantula is back where it belongs now.

So you see, exotic birds and reptiles are not confined to remote and unseen areas. When the sun returns to Ithaca, you may be able to watch a python relax on campus. Or the next time you ignore the phone ringing, put the blame on your next door neighbor’s loquacious parrot.
In 1882, Cornell women never talked to men on campus. Charlotte Conable quoted a coed who reported, “We walked demurely, as inconspicuously as we could manage, and took seats always at the front... We were not insulted, only tolerated and ignored.” The women of this 1910 class still sat in front.

HER STORY

Coeducation at Cornell

When Jennie Spencer entered Cornell in 1870, there was no women’s dorm. There was no Women’s Studies program. In fact, there were no other women. As Cornell’s first female student, she was forced to take residence in Ithaca, at the bottom of a hill almost as challenging as Cornell itself. After a few months, winter’s icy slopes and a climate otherwise against her favor led her to leave Cornell.

Today the student population is almost equally divided between men and women, and it isn’t hard to forget that it was not always so. How could a woman study economics or engineering at a time when fainting spells and frailty were the fashion? Popular opinion, as expressed by philosopher Jean-Jacques Rousseau in *Emile*, dictated that a woman become educated to benefit a man, to “be pleasing in his sight, to win his respect and love, to train him in childhood, to tend him in manhood, to counsel and console, to make his life pleasant and happy...and this is what she should be taught while she is young.”

But Ezra Cornell had a vision of “an institution where any person can find instruction in any study.” Yet there was not even enough room to accommodate the men on campus, much less women. Henry Sage was so committed to the idea of women’s education at Cornell that he donated Sage College as a women’s residence. Even prior to the completion of Sage College in 1873, however, a few women began to attend lectures in hope of obtaining a degree. And so Emma Sheffield Eastman became in 1873 Cornell’s first female graduate.

Charlotte Conable ’51, in her book *Women at Cornell*, describes the series of obstacles which stood in the way of coeducation at Cornell. President A.D. White came across a study by Dr. Edward Clarke, a respected professor at Harvard Medical School, which suggested that the strain on women resulting from “brainwork” caused neuralgia, uterine disease, and hysteria, and might cause children to be born deformed. White was not fooled. In April of 1872, four years after the University opened, women were officially accepted into Cornell.

Conable points out that while women’s colleges aimed to serve the daughters of wealthy professional men, Cornell was one of the first institutions to financially encourage all women of sufficient abilities. And so the words which Ezra Cornell delivered at the University’s opening proved true: “I believe we have made the beginning of an institution which will prove highly beneficial to the poor young men and poor young women of our country.”

And the women were eager to learn. Conable states that although women were a small percentage of the student population, they received more than their share of academic honors. Yet sexual equality remained elusive. Because Sage College was not filled to capacity, residence in the hall became mandatory for all women students in 1884. Hopes for equal treatment of the sexes fell apart at the seams.
This mandatory residence rule imposed limits on the number of women the University could admit, resulting in more selective admissions standards for women. As Conable explains, quotas became a mechanism for channeling women into fields considered appropriate for them. In the early 1900's, courses in home economics began. Study in home economics was intended to improve all aspects of family life.

Adding to the developing climate of sexual inequality, the University hired housemothers for Sage College. Strict curfews and dress codes were imposed. Men were allowed to visit women in their dorms only at specified hours, and only in the parlor or living room. In Sage College, the University held teas, receptions and dances as part of an effort to equip women with the proper graces.

Rules governing women's behavior marked the beginning of widely disparate social climates for men and women. Though Ezra Cornell was determined to educate the poor, most Cornell men at the turn of the century were sons of wealthy urban men, and studied law, engineering, or architecture. Women more often had limited means and humble aspirations. Men banded together to form one of the strongest fraternity systems in the country which explicitly excluded Cornell women from their social functions. According to one female student Conable quoted, "We never talked to men...We were not insulted—only tolerated and ignored."

But they were insulted, in more ways than one. Cornell men, as described by many history books, were ashamed of the presence of women at Cornell, especially of its effect on Cornell's image with respect to Harvard and Yale. According to Conable, campus organizations discouraged the participation of women, who were forced to form their own student government, drama club, orchestra, honor society, and sororities. Women's athletics focused on intramural activities and "playdays" while men enjoyed large scale intercollegiate competition. Women were even excluded from such activities as cheerleading and membership in the Big Red Band.

President Charles Kendall Adams explained in 1891, "It [Cornell] has never professed, nor does it now profess, that the young women admitted to its classes may indulge with impunity the same freedom that is permitted to young men. It holds that at the age at which at least a very considerable number of young women come to the University, no small part of the education that they need is the elevating influence of a wholesome social atmosphere and the inspiration of a wise and discreet guidance and companionship." A similar need was apparently absent for men.

World War II changed the climate of Cornell irreversibly. While many male students were called to military duty, women assumed leadership positions in campus organizations and eventually retained them after the men's return. Even after the war, however, Willard Straight Hall maintained two separate entrances for men and women, with women restricted to the use only of the rest room and the two lounges near the women's entrance. The Straight was not fully integrated until 1977, when women were allowed to patronize the barber shop.

Social restrictions eventually faded during the 1960s, when dormitory policies became the same for both sexes. Men's and women's organizations began to merge. Women's sports began to receive serious consideration, and the Helen Newman women's athletic facility was built in the mid 1960s. The home economics school became the College of Human Ecology in 1969, and a Women's Studies program was established in 1972 under the direction of Prof. Jennie Farley, BA '54, MS '69, PhD '70, who teaches industrial and labor relations.

Farley recalled her undergraduate days with a mixture of joy and frustration. Though she met with obstacles because of her sex, such as being laughed at when she tried to join the ROTC, she did not experience the strong sense of indignation that women today might feel. "We were aware that there were many restrictions. It never crossed our minds that there was anything unusual about that."

Farley recalls her social life in a positive light, despite some social tensions between the sexes, such as the prevailing myth that "Cornell women were ugly and stuck up and had fat legs." She still remembers a song sung by Cornell men which went, "A Cornell coed takes a scrub, and leaves a ring around the tub." She added, "The men may have sung mean songs about coeds, but in the end, they married Cornell women." Farley married a Cornell man—and the union is holding up nicely after 32 years.

Coeducational life at Cornell today is a far cry from the artificial and rigid climate of the past. Students occupy coed dormitories with coed bathrooms. Women and men share leadership positions, and overall, enjoy equal treatment. Of course, improvements remain to be made. Farley said she would like to see coed fraternities, and a more diverse faculty which would draw more women into non-traditional fields.

Perhaps Ezra's vision is close to being realized. Oh, Cornell, if only Jennie Spencer could see you now.
Tucked away in the East Wing of Martha Van Rensselaer Hall are 43 of Cornell's youngest students, ranging in age from three to five years. Children attending Cornell University School are as diverse as Cornell students: 14 children speak English as a second language, and all children are selected from different walks of life to form a balanced, heterogenous group. Instead of rows of chairs and a blackboard, their classrooms are filled with toy cars and boats, child-sized furniture and assorted building blocks. The walls of the spacious, cheerful nursery are covered with painted giraffes, birds, butterflies, flowers and the children's art work.

The Cornell Nursery School was founded in the 1920s as a research laboratory for the Department of Human Development and Family Studies in the College of Home Economics. Today, over 600 Cornell students a year from all colleges use mesh-covered observation booths in the nursery for undergraduate class work and graduate research in child development. Each year many HDFS majors interact directly with the children, spending one to 36 hours a week in the school for course credit. "The purpose of the nursery school is as a learning center for Cornell students," said Sue West, director of the school.

Since the nursery school is so closely linked to the University, its teaching philosophies throughout the years have reflected the psychological theories popular in the academic world at the time. In the 1930s and 40s when Freud was a major psychological theorist, nursery school teachers kept a greater distance from the children. "Teachers tried not to inhibit or frustrate the children in any way," said West. "They were encouraged to let them play and express themselves." Research at the time focused on emotional development, rather than physical development as in previous decades.

In the 1960s when the work of Jean Piaget gained influence, teachers' interaction with children changed again. Teachers worked more closely with nursery school children and research centered on children's cognitive development. Piaget stresses the importance of children's interaction with their environment. As a result, teachers attempted to stimulate children's cognitive development and fulfill their role as supporters of children's learning experience.

Today, the school's overall goal is to provide children with an ideal environment for physical and mental growth, as well as social and emotional development. Active learning, defined by Piaget as learning through direct activity, is the school's basic educational philosophy. "We provide children with experiences in which they can learn through their own exploration and feedback," said West. Teachers serve as role models for children's social and intellectual development, as well as directors of their educational activity.

Most children spend two years in the nursery school before they move on to kindergarten at age five. Play and social interaction are stressed, although children participate in some pre-reading and pre-math exercises. Nursery school students are children of Cornell faculty, staff, graduate students and non-Cornell community members. "When we select students we give preference to siblings, then we balance the boy-girl ratio and enroll students whose parents are from all income levels," said West. "Tuition is based on income before taxes and is different for all financial levels."

West and two head teachers are also faculty in the HDFS department and are paid by the university. Parents' tuition fees pay for the salaries of two assistant teachers and all of the school's operating expenses.

"We want the children to learn to trust teachers," said West. "We introduce children to this program gradually to build that trust, which is essential to later classroom learning." Not only do children prepare to learn at the school, but Cornell students and staff learn from the children. "For the students, getting to know real children brings their course work to life," said West.

by Melba Kurman '89
Aaron Moen: 
A Scholar and a Mentor

Sitting in 208A Fernow gives one a certain feeling of order. There is the computer positioned ever so carefully on the desk, a couple trays of disks at its side. Dr. Aaron Moen is sitting at the desk in the swivel chair talking, thinking. Yes, Moen is a real thinker, and according to him, that is what teaching and learning should be all about.

Moen, a professor in the Department of Natural Resources of the College of Agriculture and Life Sciences, has been teaching in the college for 20 years. "I come from a family of teachers. I never thought seriously about being anything else," he said.

Moen teaches two natural resource classes in the ag college, Agriculture and Wildlife and Principles of Wildlife Management. He is also known for his research on white tail deer. But Moen is more than just a teacher and researcher. He is a man who strongly believes in helping his students to learn how to think, which he believes is more valuable than teaching them only the facts of his subject.

"In school, we aren't stressing thinking as much as we should. We stress memorization instead of real learning," he said. "I like to learn by doing."

Moen's past strongly attests to this. He was born in Starbuck, Minnesota and grew up on a farm in the small town of Kensington, Minn. He graduated from high school in a class of 16 students and went on to gain his bachelor's, master's, and doctoral degrees from several Minnesota colleges. While in Minnesota, he also coached high school basketball. In 1967 he came to work at the ag college.

A typical day for him consists of teaching a couple of ag and wildlife courses and working at his computer whenever he gets the chance.

"I try to do everything I have to do on the computer, whether it be processing words or numbers. There is a lot of thinking and organizing behind everything I do," he said.

In fact, Moen stresses computer literacy in his classes. "I like to think of computers as a mental peripheral. It's a device that works with our minds. We might well use a computer every time we use our minds."

But Moen is also a people person. He enjoys working one-on-one with students. This is another reason why the computer is very important to Moen. "Using a computer to do things leaves more time for me to work with people," he said.

Moen is president of Gamma Sigma Delta, the International Honor Society of Agriculture. This organization honors high levels of scholarship, something Moen really believes in. "Every student should strive for the highest level of scholarship they can attain," he said.

Moen's children reflect his attitude toward learning and education. All four graduated from Cornell, and have earned or are earning higher degrees.

"My wife and I tried to help our children to learn how to make decisions. We don't remember making our kids study. We didn't stress grades. We wanted them to love to learn, to love to read. If they do, I'm not concerned about whether they will study or not. I think they will."

These are the same values Moen tries to instill in his students. Although he teaches them for only a semester, many students have come away with a good feeling about him.

"Even though I was afraid of the work we had to do on the computer, I liked the way he kept at me to try. I felt like he really cared," said a student who took his class on ag and wildlife.

Moen has a few words of advice for students. "I want you students to learn how to solve problems. I want you to learn how to think. Those are attributes of lasting value. If I help you learn how to think and solve problems, then I've done my job." □

by Jyna Johnson '88
As a young boy, Liberty Hyde Bailey made a plan for his life. He resolved to spend 25 years preparing for life, 25 years making a livelihood and 25 years doing what he pleased. Strong-willed and filled with a zest for life, Bailey kept his promise and, at ninety, was able to say, "My life has been a continuous fulfillment of dreams." A superb scientist, teacher, administrator, writer, editor, philosopher and poet, Bailey ranks as perhaps the greatest man ever to grace the College of Agriculture and Life Sciences.

During the first 25 years of his life, Bailey was strongly influenced by his environment. His blue eyes and austerely visage belied an enthusiasm for life and living that he bestowed on everything around him. Born in 1858, he grew up in the wilds of Michigan. His Puritan father constantly admonished his children of the "necessity to be honest, to stand upright as you walk and as you live, to have a purpose in what you do and to do good about you," maxims that were to guide Bailey's actions throughout his life.

He was a child of the land, interacting with migrant Indians and communing with nature. On his father's farm, young Bailey explored every leaf, every flower and every tree. Later on in life, he would remember how a child "looks out to Nature with great eyes of wonder." This outdoor education inspired in him a love for botany that spurred his indoor schooling. Educated at first in a one-room schoolhouse, Bailey went on to study under botanist William J. Beal at Michigan Agricultural College (now Michigan State) and then became the special assistant to Asa Gray, renowned leader of American botany.

It was during this time that he became increasingly interested in horticulture, the study of cultivated plants. At that time, in the words of Gray, the botanist was a scientist, the horticulturist merely a gardener. Bailey, however, was convinced that the science of botany combined with practical horticulture would advance agricultural practices. History would prove him absolutely correct.

With these firm roots, Bailey spent the next 25 years of his life sharing his knowledge and enthusiasm with students, first at his alma mater and then, beginning in 1888, at Cornell. At that time, agriculture was barely a department of the University, with only a few professors, a dairy barn and a farm. Bailey soon distinguished himself as a brilliant teacher, popular with the students and the faculty. His teaching style and philosophy reflected his down-to-earth manner, and raised a few eyebrows. He emphasized the informal exploration of the wonders of nature instead of learning by fixed curriculum or examination. Instead of the usual lecture combined with "formal parades to visit and view the activities of the University farm conducted by hired hands and foremen," he instituted laboratories where both he and the students would take part in plant experiments. In 1888, this teaching method is commonplace in universities, but in 1888, it caused some consternation.

In a series of nature study pamphlets designed for public school teachers and children he wrote, "The teacher must first of all feel the living interest in natural objects which it is desired the pupils shall acquire. If the enthusiasm is not catching better let such teaching alone." Ten minutes a day of "short, sharp and spicy" observation of plants, he said, is more valuable than a whole botany textbook. The purpose of such a study is to put the child in "living sympathy with everything that is."

Bailey published over 800 articles and books on various aspects of the study of nature. In the eloquent prose and animated language that so characterized him, he wrote on varied topics, from the theoretical to the practical, from the squash to the art of garden decorating. He also edited several publications, including American Garden and Country Life in America. His reference books on horticulture remain as useful today as they were 100 years ago.

By 1890, Bailey was cited as the foremost teacher of horticulture in this country. Graduate students from all over the world came to Cornell to study with him. He formed a club called "The Horticulturalists Lazy Club," which met every Monday night for apple cider, talks on horticulture and the "relaxed and stimulating" companionship of Bailey. Every Sunday night, he opened his Sage Place home to students and faculty members. There, Bailey would...
read poetry or inspiring works by Poe, Whitman and Emerson. These gatherings attracted so many people they had to be moved to Barnes Hall and then later to Roberts Hall. Bailey looked forward to these sessions saying, "They help keep me young."

Bailey's popularity and his national reputation made him a natural successor to departing Dean Isaac P. Roberts in 1903. As an administrator, he immediately set to work expanding the College. During his ten year tenure, he increased the faculty members from 11 to over 100, including the radical appointment of the first two women professors Martha Van Rensselaer and Anna Comstock. He enlarged the curriculum with courses like agricultural engineering and rural landscaping. The scope of the new curriculum finally persuaded the University trustees to begin awarding a bachelor of science degree to graduates of the College.

In 1904, after long years of fighting the New York State Legislature and the University, Bailey finally secured state funding for the College of Agriculture. This made the College the responsibility of the state and its people, which Bailey felt was its rightful place. At the dedication ceremony he emphasized again, "This College of Agriculture is not established to serve or to magnify Cornell University. It belongs to the people of the state... The farmers of the state have secured it. Their influence has placed it here. They will keep it close to the ground."

The student population also increased from less than 100 to over 1,400 under Bailey's leadership. Despite the growing numbers of students and faculty, Bailey wanted to continue the intimacy of the College. So he began regular, mandatory assemblies to gather the faculty and students together to discuss College affairs. He also established the Cornell Countryman as a way for all members of the College to identify with the advancement of the College. One student wrote, "During all those years, there was an esprit de corps that bound all or most Ag students (and teachers) to high ideals and high adventure." Bailey, through his enthusiasm for life and learning, had left his imprint on the College.

After more than 25 years of service to the College, Bailey felt it was time to move on. But while for most people retirement is a time to relax, for Bailey retirement provided a time to devote to his greatest pleasure, his plant work. He traveled tirelessly, searching the jungles of Africa, the swamps of Panama, for new plants to catalog. He brought them home to his "hortorium," a Bailey-created institution displaying cultivated plants as well as natural plants. (The Bailey Hortorium, now permanently located in Mann Library, still houses the vast Bailey collection.)

Bailey remained energetic and quick-witted throughout his old age. When Bailey was 80 years old, a reporter wrote, "His mind is as sharp as his tongue. His enthusiasm is contagious. He stands like a ramrod, offers a handshake that leaves other men limp." But at 92, on his way to Africa, Bailey was jostled on his way out of a New York City bank and broke his leg. He never made it to Africa and died four years later in his Ithaca home.

When Bailey was 87 years old, he discussed the importance of expanding one's mental limits. He referred to Turkey Hill, a hill overlooking the University and Cayuga Lake. "I went to the crest and I visualized the developing of a sentimental idea whereby every student going through a four-year course would once in his course go to the top of Turkey Hill and get a horizon," he said. "Most people have no idea of a horizon of a landscape, let alone a horizon of life." One hundred years after he came to Cornell, Liberty Hyde Bailey, through his professional work, his contributions to the College and his inspiring character, is remembered for giving all of us a greater horizon of life.

Bailey's down-to-earth teaching style emphasized the informal exploration of the wonders of nature, instead of learning by fixed curriculum.
“Higher education” takes on a literal dimension for Cornell graduate students interested in tropical studies. Abandoning the traditional classroom structure, walls transform themselves into tree trunks teeming with botanical growth while ceilings dissolve into verdant canopies interlaced with rays of tropical skylight. Students could easily find themselves discussing ecological topics in the crotch of a tree or at the top of a waterfall when taking courses offered by the Organization for Tropical Studies (OTS) in Costa Rica.

As a member of OTS, a consortium of American and Costa Rican universities, Cornell provides the opportunity for grad students to study in Costa Rica’s many tropical forests and at OTS’s three research stations. “The stations, especially La Selva, are the best equipped tropical research and training facilities in the world,” said Dr. Richard Root of Cornell’s Section of Ecology and Systematics who also serves on the Board of Directors for OTS. Students make use of the facilities by taking one of two eight-week courses in either the fundamentals of tropical ecology or a course in tropical “agroecology.”

Most people concerned with ecological conservation agree a serious dilemma faces tropical wildlands. Preservation of these environments meets political and economic constraints, human and ethical barriers as well as pressures imposed by a lack of time. In a daily struggle to survive, people of third world countries practice “slash and burn” agricultural techniques and strip the land to create pasture for grazing. Sans foresight, this can result in destruction of tropical forests while providing only rapidly diminishing returns for the farmer. Tropical soil, without natural root systems to hold it together, erodes and loses much of its capacity to support life. With the demise of these ecologically diverse areas many species of plants and animals may become merely legends unless corrective measures are taken.

OTS, itself, may become a crucial factor in the race to save tropical forest areas as it trains future researchers interested in the tropics. OTS had its origins in 1961 when the University of Southern California and the Universidad de Costa Rica jointly offered a field course in tropical biology in Costa Rica. As many U.S. universities shared an interest in establishing tropical research stations, OTS was formally founded in 1963 as a group of seven institutions funded by membership dues and by grants from various philanthropic foundations. OTS has since expanded into a 44 member affiliation with use not only of their own research sites but also access to Costa Rica’s national parks and forest reserves.

So many people have participated in its programs since 1963 that “Almost anyone today who is seriously interested in tropical biology has had some connection with OTS,” said Frank Joyce, a Cornell graduate student in the field of zoology who also conducts his own research in Costa Rica.

Facilities and acreage at the three OTS stations La Selva, Palo Verde and Wilson Botanical Garden (or Las Cruces) have been upgraded and expanded as finances have improved. At La Selva, “the jewel” of research stations, computers, radio communication, air conditioned labs, and equipment for tree-top exploration are available for students, faculty, and researchers, said Root.

Acreage has increased through the purchase of a corridor of virgin forest, Zona Protectora, which joins OTS land at La Selva with Braulio Carrillo National Park. This was an ecologically significant purchase as well as a lesson in human cooperation that belied political and economic barriers. It preserves an area of wilderness for many species of plants and provides an uninterrupted land tract for migratory animals that travel between a lowland rain forest (at La Selva) and a mountainous environment crested by a volcano in the national park.

Costa Rica, relatively small in area, but with a diverse range of tropical biota is ideal for OTS and OTS is more than willing to be an asset to Costa Rica. At Wilson Botanical Garden local residents help care for the grounds and volunteer services such as recently installing electrical wiring in some of the buildings. “Local people think of the Garden as their own garden,” said Dr. David Bates, a member of the Liberty Hyde Bailey Hortorium and of OTS’ Board of Directors.

Education of citizens is of high priority to OTS, and local children visit the stations as part of their schooling. “In the long term sense, if kids are educated that forests are a good thing to keep, they will see the worth of these things at an early age,” said Dr. Alison Power, an OTS visiting faculty member and professor in Cornell’s Section of Ecology and Systematics.

A spirit of cooperation will become a determinant factor in saving our tropical forests and wildlands. Gently weaning people from dependence upon uncontrolled subsistence agriculture is a political and economic responsibility. Reforestation will be the concern of trained scientists and land managers. This trend toward collaboration has surfaced in a course OTS is offering to key persons involved in decision-making and management to enlighten them on matters of tropical ecology. Fellowship, quality training, and local involvement are some of the miracles occurring in Costa Rica that will determine the fate of tropical peoples and the wild habitats they must guard.

by Amy L. Sliter ’88
Designers in Denmark

Foreigners who are “just off the boat” can be so annoying to Americans. They often do not have sufficient knowledge of the American culture to assimilate well, and in many cases their basic problem is communicating. Now I imagine stepping into their shoes. Senior students in the Landscape Architecture Program did just that in the fall of 1987, as part of a five-year-old annual Cornell tradition. Through Denmark’s International Study Program (DIS), these students traveled to the University of Copenhagen to study design for the semester.

Landscape architects go to Denmark for a variety of reasons. “DIS is a lot easier for us than some other programs because it allows us to send whole groups overseas, instead of negotiating each person individually,” said Peter Trowbridge, Department Coordinator and acting coordinator of the DIS program.

Another reason for studying in Copenhagen is the marked difference in design styles between Scandinavia and the United States. “Scandinavian housing design is more concerned about social issues than comparable American design. Cornell’s landscape architecture program lacks the kind of specific social responsiveness found in Denmark,” Trowbridge said. Sylvia Kreel ’88, a landscape architect who traveled to Denmark, also noticed the difference. “The Danes are really big on housing schemes that encourage a good social environment,” she said.

The difference in styles and outlooks stems partly from the environment of the school. Because of Cornell’s location, the urban and social issues of design do not crop up very often. “You can’t import urbanity,” Trowbridge said. Copenhagen’s environment “provides a good breadth of experience in a culture and urban setting that we can’t achieve at Cornell.”

Architectural differences between America and Denmark also reflect a deeper concern about social issues among the Danish people. One student said, “The Danes are more politically aware than we Americans are.” She felt that politics affects them more than it does here, and that the marked difference accentuated Americans’ ignorance.

Interpersonal relations of the students also emphasized the differences between nationalities. “The Danes have a different way of getting along,” said Bruce Berrien ’88. “They are more supportive of each other, less competitive. The Americans are always playing one-upmanship.”

Not only in their work environments do the students contrast, but in social settings as well. One student said that Danish students noticed how they could tell Americans from the Danes in the dining hall. “Americans are always chit-chatty when they meet new people. The Danes just are not into small talk like the Americans are,” she was told.

When the Americans were not out being social, they were working on projects in the studio or traveling to other parts of Europe. For most of the students their work loads were lighter than their Cornell schedules back in Ithaca.

Kreel said that she took many trips out of Copenhagen. When she and her friends were planning weekend trips while projects loomed over their heads, her professors would tell her “Go, but be prepared to accept the grade.” She commented, “Of course I’d go. You don’t need to go to Europe to sit at your desk all day. You could do that in Ithaca. Traveling was the highlight, not academics.”

“Students have new sets of agendas in Denmark,” said Trowbridge. “There is a different academic demand than at Cornell, so the students are involved in more and other activities.” Because of the more open, less rigorous schedules, the landscape architecture program must put some restrictions on acceptance into the program. Despite the requirement of having an average of A- or better, over half the class usually goes. “If the student has shown that he or she can’t sufficiently handle the academic environment of Cornell, then he or she would have a difficult time dealing with the independence of living in Denmark. In our first year with DIS, anybody who wanted to could go. But some of them found the situation too difficult,” Trowbridge said.

“Going is almost like a given thing if you’re a decent student,” Berrien commented.

Students who did not go abroad were also able to observe the changes in those who had gone and returned. One student remarked, “The people who stayed are working in studio more often. The people who went and came back are more nonchalant about the whole thing.” This change was described from within by Berrien, who said that since his return, “I have different goals in life. I feel freer about things, less weighted down. It’s like my life is more in my own hands, instead of just doing what’s expected of me.”

by Glen P. Shannon ’88
In 1888, nine years after the founding of the Cornell University Agricultural Experiment Station of the New York State Colleges of Agriculture and Home Economics, the Station is in the midst of a full reorganization and under the new direction of Prof. Isaac P. Roberts. In the year since the passage of the Hatch Act arranged funding for agricultural research, the Station has successfully followed the example of agricultural research and application in England and Germany. University officials have begun to bestow more attention on agricultural education. This is perhaps a natural result of the advancements in the fields in the 1880s. The 80s have been an age of division of agricultural knowledge into more and more narrow fields, each division with unique language and methodology.

What follows is a report to the public on the progress and results in the work undertaken by Station staff.

The size of the dairy industry in the state makes the marketing of milk a prime concern. The AGRICULTURAL ECONOMICS department conducted a study of the general operating costs, and the costs of hauling milk of farms of different sizes. Since larger farms produce cheaper milk but incur more costs in hauling, the study recommends reducing total costs by consolidating country milk plants.

The department has also done some work on the handling of feed, fertilizers and other basic farm supplies. The study discovered that in many cases, buildings are too expensive, too many employees are hired and too much credit is extended. These results will be applied immediately around the state to make the handling of farm supplies more economical.

Other research concentrated on determining which areas of the state can host profitable farms. State legislators have looked to this work for guidance in decisions on what land is used for game, recreation, forestry and protection of stream flow.

Also in the agricultural economics department, Roberts is developing a cost-accounting system for biological industry. He has also worked with farm livestock in the ANIMAL HUSBANDRY department. His work there was studying the effect of castrating male lambs on the quality of the carcasses as food, comparing effects of various protein supplements on swine, determining the causes of "apoplexy" in winter-fed lambs, and studying silo construction, silage making and the use of farmyard manure.

Prof. James Law of the school of veterinary medicine has been working on the relation of farm animal diseases to public health, concentrating on the possibility of bovine tuberculosis being transmitted to humans through meat or dairy products.

H.H. Wing, deputy director of the station, is experimenting with milk secretion, bacteria in milk, cream separation, methods of milking and testing milk for butterfat, the effect of feeding fat to cows, the relation of feed to milk and fat, and the cost of production of milk, meat and eggs. His work has changed the criteria for selecting dairy cattle for milk production and breeding nationwide, as has his system for officially testing cows for milk and fat production. Also, in expanding and developing the dairy herd, he developed the Glista family of Holstein-Friesian cattle.

In the DAIRY INDUSTRY department, Roberts continued his work on milk and milk products like cheese and cream. George C. Caldwell investigated the chemistry of milk and developed

On-campus vegetable plots were used by students and faculty for research.
a method to test the level of fat and total solids in milk. The procedure makes it possible to enforce the state legislature's recently established minimum three percent fat content and maximum 12 percent total solids in milk.

In ENTOMOLOGY, Prof. J.H. Comstock devoted his studies to wireworms, their life cycles and ways to control the larvae which are harmful to grains. Also, the treatise on scale insects that Comstock published five years ago continues to be in high demand.

Professors in FLORICULTURE worked with the cultivation of the American camas and the peony, studied the effects of acetylene light on greenhouse plants and examined variations in snapdragons.

Working with a collection of hays from all over the world, Dr. T.F. Hunt developed two strains of Timothy with different seasons of maturity. His research focused on three areas: the variety and breeding of crop plants, field-plot techniques and theoretical genetics.

In PLANT PATHOLOGY, Prof. W.R. Dudley examined the life history of the apple scab fungus and Mr. E.G. Loderman, from Switzerland, tested experimental spraying methods to control the fungus.

Perhaps because of President A.D. White's interest in systematic POMOLGY (he is known to visit labs on occasion to see and sample specimens), there has been a large amount of work conducted in that department. Much of the work in this field is geared toward developing a scientific basis for interpreting plants' responses to various cultural practices, as well as varying climate and soil factors. This research should help alleviate the basic problem in the current industry of wild fluctuations in yield from year to year on many farms.

Bailey established a collection of wild and cultivated fruit species and is studying the variations of plants under culture. He published some of his results in "Windbreaks in Relation to Fruit Growing." Bailey pointed out difficulties facing fruit growers, and has enlisted the support of those farmers for the Station.

VEGETABLE CROPS has also received a great deal of attention because of its very practical and imminently applicable aspects. Bailey completed "On the Influences of Certain Conditions upon the Sprouting of Seeds," which isolates 11 factors governing the initiation of growth in vegetable seeds. His work puts forth the new idea that sprouting and germination are distinct occurrences, and also calculates the percentage of variability between replicates. Bailey concludes that impurities in vegetable seeds are not important but viability is,

writing "the greatest risk in the purchase of seeds is the possibility that inferior strains or varieties may be procured."

Work with tomatoes also took a central role at the Station. That research delved into the benefits of varying amounts of manure, which plants produce the best seeds, and the possibility of breeding a truly superior tomato plant (given that it is easy to breed a new strain of tomato).

Researchers examined the effects of artificial light on plant growth and reproduction. The experiments found that plants too close to an unshaded lamp were damaged.

All of this research deserves the attention it has attracted from the University, area farmers, New York state and the country. As one of the first such facilities in the country, the Station strives to fill the leading role in which it finds itself. For decades to come, people involved in agriculture will rely and build on the work done at the Station in 1888.

"The research discussed in this article did not all take place entirely within 1888. The author has taken the slight liberty of including work done in the period between 1887-1889 for the sake of having a more complete view of the College one hundred years ago.

by Colleen Kaplin '89

Pomology students, in 1888, studied the effects of climate on plants.

The dairy industry department of 1888 developed a test for milk fat and solids.
The very existence of the New York State College of Agriculture as well as its phenomenal success, present character and personality are directly due to Liberty Hyde Bailey, wrote Morris Bishop in *A History of Cornell.* "Bailey, it may be remembered, came here as professor of horticulture in 1888 and set an example of productive energy that no one else has had the strength and genius to follow. Bailey was a college in himself, teaching, experimenting, lecturing, running a far-flung extension program, publishing eleven books and uncounted articles in five years," continued Bishop.

A hundred years has passed since Liberty Hyde Bailey began his illustrious career at Cornell, but the standard of excellence he set for the faculty of the College of Agriculture and Life Sciences still stands today. "One thing has not changed through time. We are at the cutting edge of scientific progress because professors very quickly incorporate the things they are researching into the courses they are teaching," said George J. Conneman, Director of Instruction for the College. "The professors are writing the books and putting the materials in their courses."

According to Conneman, major changes have taken place through the years in the college courses. "Students once took a more limited range of courses than they do now. The mix of courses students take is much broader now than before," Conneman said.

In 1888, the year the College of Agriculture was incorporated into the University, the Cornell University Register lists courses such as mathematics, French or German, English and freehand drawing as requirements for freshmen majoring in agriculture. At this time, students received general agricultural degrees and were able to take specialized courses in only six different areas. The enrollment in the College was about 20, the total enrollment of the University at 575.

In 1904, the New York State College of Agriculture at Cornell University was established by the state legislature. This legislation made the College both a land grant institution and part of the State University of New York system. The Cornell University Register for 1904 shows expanded courses of study for freshmen interested in a degree in agriculture, including classes in botany, geology, entomology and invertebrate and vertebrate zoology. These additions were made possible as the College increased in faculty size and specialized course offerings. For the academic year 1904-1905, the College had twelve categories of these specialized courses available. Included in these categories were courses in agricultural chemistry, soils, dairy industry and rural economy and sociology.

The College now offers the student a wide range of majors—a total of 17 in all. This number contains a degree in general studies in agriculture (including international agriculture) which is still granted by the ag college. Within these majors, the student can choose between many different areas of specialization. The enrollment has also increased greatly since the days of Bailey from about 20 students in 1888 to more than 3,000 in 1988.

The second change in the ag college which has evolved through time is in the content of the courses themselves. "Some of the course titles may sound the same but the content is drastically different. At Cornell, we tend not to change the course title or number. We update the content—that's the secret," said Conneman.

An example of a course with a similar title accompanied by some change in content through the years can easily be found by comparing the course titles and descriptions of 100 years ago with those of courses offered in 1988. The Cornell University Register for 1904 lists "Greenhouse Construction and Management" as course 25 in the category of Horticulture. The course required a textbook and included lectures and afternoon laboratories. The catalog for the College in 1988 lists a course number 425, called "Greenhouse Production Management" in the Department of Floriculture and Ornamental Horticulture. This course includes lectures, field trips and a textbook in its study of this special form of agriculture.

An old saying states: The more things change, the more they stay the same. This statement is particularly true of the College of Agriculture and Life Sciences. The tradition of excellence established 100 years ago by a single man is still with us today. Conneman reiterated this belief when he said, "The view of the College has always been that we would provide leadership training for people much in the same way that Liberty Hyde Bailey and Isaac Roberts once did." □

by Janice M. Viveiros '89
Many changes have taken place in the 100 years Ithaca has been a city. In 1888 Cornell University had 1,000 students, today it has 18 times that number. One thing students both then and now have in common is the search for perfect housing. Well, if not perfect at least reasonably priced and in a good locale.

In 1868 when Cornell first opened, there were two university owned housing structures. These buildings provided housing, lights, furniture and board at $5.81 per week for most of Cornell's 412 undergraduates.

Cascadilla Place and South University Building (now Morrill Hall) were the two original 'dorms', and housed both faculty and students. Students criticized Cascadilla for its poor ventilation and lighting, finding it gloomy and ugly. In addition to its discomforts, universi-

ty housing was somewhat more expensive than the rental housing available in town. Town prices started as low as four dollars per week.

Today Cornell has 21 residence halls (including a renovated Cascadilla Hall), and a town house community. In addition to dorms, Cornell houses undergraduate students in eight residential program houses where activities center around a theme and ten small residences where students share management of the house. Graduate students live in three residence halls, two small residences, and two apartment complexes designated for student family housing.

About one-third of current students live in Cornell-owned housing. The remaining two-thirds of Cornell students scramble to find the perfect apartment in Collegetown, although costs have skyrocketed to more than $300 per person per month for some apartments.

In 1888, College Avenue was originally known as Huestis Street and became home to Cornell students to meet the growing demand for housing. Rooming houses where students were provided with sleeping and living arrangements, and boarding houses which also provided meals, were available all over Collegetown. Some of the boarding houses built in the 1880s, such as 207 College Avenue built in 1887, are still being rented.

The quality of apartments found in Collegetown has always ranged from the slum-like to the elegant. Some of the recently built apartments, such as Eddygate on Dryden Road, have plush carpeting and modern appliances. Other apartments, however, appear to have been left without improvements since the early part of this century.

Although some of the buildings remain the same, renting practices have changed quite a bit. In 1888 most landlords and their families lived in the house they were renting. Some boarding houses provided janitors, cooks and servants on the premises. Today, some renters never even meet their landlords, as many landlords rent through agents.

Besides the convenience of a household staff, another reason students chose to live off campus in the early 1900s was the good food provided by landladies. Although many students would love the luxury of home cooked food, nowadays they must endure their own cooking or depend on the university dining halls. Cornell Dining provides a campus meal plan available at seven different locations around campus.

Gone are the days when women and men had to be housed separately. In 1884, the Board of Trustees required that all women board at Sage College. At the time, many women were outraged and insisted on the right to live off campus if they chose. Now, both men and women have the right to choose where they wish to live.

Today there are still a few single sex dorms on campus. Balch and Lyon halls, as well as a few cooperatives, are exclusively for women. Boldt Tower and Boldt and Mennen halls house only men.

One tradition that has been rejuvenated in modern times is the Faculty in Residence Program. It was once common for faculty to live in the same dorms as students. Cornell recently reintroduced this tradition, bringing the faculty closer to the students on an informal basis.

Times may change the conditions and costs of housing but one thing remains the same: Cornell students will continue their quest for the perfect place to live during their college years.

How do you get to HUESTIS STREET?

by Robin Barker '89

100 years ago, these collegetown buildings housed students for as low as $12 a month. Now, rent has skyrocketed to more than $300 per person.
"History repeats itself." This proverb has proven true in life and, more specifically, in the progression of Cornell's student government. Campus government elections in March 1988 drew the lowest ever voter turnout and a large amount of criticism of Cornell's student government. Students often talk of uprooting and restructuring the Assembly system.

Few, however, know that in the early 1960s, a group of students that ran for office in the student government were also discontent. The students abolished the current government, and the system has been rebuilt three times since then. The turmoil finally settled with the construction of our present Assembly system, the longest-lasting campus government at Cornell.

According to Cristen Gardner, Director of the Office of the Assemblies in Day Hall, student life in the late fifties was governed by strict rules. Men and women could not occupy the same space; when dormitory visiting hours were worked out (4 to 6 p.m. on Sundays), students could not shut their room doors and had to keep one foot on the floor at all times.

Students who opposed these rules, and there were many, responded in "what I consider to be the first modern, mass demonstration on Cornell campus," according to Bern Weintraub, '87, a government major and former Student Assembly co-speaker. Weintraub's thesis, Formal Campus Self-Governance at Cornell University: the Weintraub Chronicles, is the most comprehensive review of the history of Cornell campus governance available.

The Confrontation of 1958, as it came to be called, led to a review of the Faculty Committee on Student Activities and the Faculty Committee on Student Conduct, both of which made policies governing student life. Students began to demand input into the campus decision-making process, the lack of which was thought to be at the root of their unrest. The University deans compiled a report which stated that the administration was sympathetic to the student point of view. It was the first step toward establishing a written code of conduct, explained Weintraub in his Chronicles.

The movement toward campus self-governance did not begin to mobilize until the late 1960s. Weintraub's document explains that, at the time, university education became more common and students entered college with a new-found individualism and sense of exploration. Two incidents were responsible for the rise of activism at Cornell, according to Weintraub and Gardner. During the first, Gardner said, police confiscated a campus literary magazine called The Trojan Horse whose content they thought offensive. Student protest against campus censorship led to several faculty reports on student involvement in government.

The second incident leading to increased activism was Cornell's contribution to the long list of protests on college campuses in the 1960s. As Weintraub put it, "The last thread of community trust for the administration's ability to effectively govern the University was broken in the spring of 1969." Many students were outraged by an unfavorable University Hearing Board ruling against black students who protested racial insults during an economics lecture. In response, between 50 and 100 members of the Afro-American Society took over Willard Straight Hall on Saturday April 19, 1969, Parents' Weekend. Prior to this, police found a burning cross on the lawn of a Dearborn Place cooperative.

The action had more deep-seated incentives as well; the Report of the Special Trustee Committee on Campus Unrest At Cornell (the Robertson Report) states that "The disruption of Cornell's campus life in the period from Friday morning, April 18, through Wednesday, April 23, 1969, had its most tangible origins in the black students' impatience with the alleged procrastination of the administration in response to strong demands for a black college and a black studies program." Gardner said that the administration may have fostered the blacks' discontent by trying to increase minority enrollment without offering sufficient support services.

The takeover ended when the blacks signed an agreement with the administration that dropped some of the offensive charges. According to the Robertson Report, a huge crowd of 2,000 students cheered as numbers of blacks filed out of Willard Straight Hall and descended the steps in peaceful surrender.

There was no student government in
GOVERNMENT

by Deanna Troust '89

place at Cornell at the time of these protests. To address the problem, a group named Students for a Democratic Society called a convocation in Barton Hall that attracted 7000 students and community members, Gardner said. The group spent three days discussing the governance of the University. "They demanded some type of system to be put into place so they could have input into the rules governing their lives," Gardner said. An April 25, 1969 Cornell Daily Sun editorial stated that "The new structure we are about to create must be designed to govern not only students, but to govern the entire University."

On May 7, 1969, a 367-member Constituent Assembly was born. It drew from the campus community—with ample room for black student representation—and accepted any group that wanted to become involved, according to the Weintraub Chronicles. Over the course of the body’s year-long reign, plans were made for a Campus Senate whose constitution would allow the administration to control and the faculty to shape academic policy. The Senate itself was directed to make policy for and budget all "non-academic" aspects of Cornell campus life.

The Senate's job was overwhelming. "They had to approve the budgets of the departments, not just oversee them," Gardner said. "They were known to be the most powerful campus government in the country." The body's 132 members consisted of 60 undergraduate and graduate Cornell students, 60 faculty members, and the rest administration, alumni, and employees.

The Senate system involved no checks and balances with the President or various department heads, Gardner said. Eventually, Senate members found their responsibilities too vast, she said, and the body drew fewer activists and less participation. A quorum could not be reached during Senate meetings, which left the body unable to do business. In 1977 the system folded.

"Members put to community referendum what type of government the community was interested in, and a special commission reviewed the problem," Gardner said. She said that the result, the 13-member University Council, neither satisfied students nor fulfilled the commission’s recommendations. Council committees did all the policy-making and budget reviews without the approval of the main body. Committees did need the University President’s approval, however, a tenet which exists in today’s student government.

"So you had this hub of the wheel, the Council, and on the wheel lay the committees, but there were no spokes connecting them," Gardner said. The Council was left with nothing to do. The system represented a gain for the administration in the form of necessary presidential approval, but a loss for the student body, Gardner explained.

The University Council lasted four years, after which another special commission reviewed campus governance. Students were asked their opinions on student rule through referenda once again. According to Gardner, the present "tripartite system" was then put into place.

The Assembly system consists of three separate constituent bodies: the Student Assembly, the Employee Assembly, and the Faculty Council of Representatives. A parent body, the University Assembly, draws its membership from that of the other three. Each Assembly has legislative authority over a number of University departments; the Student Assembly, for example, has policy jurisdiction over the departments of Dining, Unions and Activities, Residence Life, and the Dean of Students Office.

The caveat in each Assembly’s charter is that it has the authority to recommend; in other words, the body must constantly answer to the president. "What you have is an advisory body which works well...as an advisory body. But is that a governance system?" Gardner asked.

The question can only be answered by the students of Cornell. To govern, by definition, is to make laws; the Assembly system is now powerless to do so. Students seem to be ready for a change, but they realize that in today’s milder political climate, tactics other than protest or takeover must be used. Cornell students should be on the lookout; a sensible, well-thought-out plan introduced in the near future may result in the rebuilding of Cornell’s student government one more time. □
As Ithaca passes the century mark, Cornell University and the statewide Cooperative Extension system are celebrating an ongoing relationship of their own: the continued commitment to bring research-based knowledge to the people who use it. For the past 77 years, this partnership has helped residents throughout the state.

"Extension is better known nationally through agriculture, but New York extension is very active in cities as well. New York is, in fact, an urban state and some of our current programs reflect that; there are extension programs in New York City in food and nutrition, urban horticulture and youth development," said Lucinda A. Noble '54, director of New York State Cooperative Extension.

Despite the current urban focus, Cornell's long history in extension has been traditionally linked to food and agriculture, as the earliest days of the Cornell Cooperative Extension illustrate.

The seeds of Cooperative Extension go back to President Abraham Lincoln's Morrill Act in 1862. This law set up the land grant university system, which included Cornell in New York State.

Once the University was established, its research in agriculture and home economics produced a plethora of useful but sometimes unattainable information for rural and farm families. Experimental stations were formed in 1867 so scientists could test their ideas, but the gap between academe and the arable land was wide.

Fred Morris worked in Cornell Cooperative Extension from 1922 to 1957. During his tenure as the director of county agricultural work, he was personally involved with many of the early decisions and is well-versed in extension history.

According to Morris, the Smith-Lever Act in 1914 established the funds and the structure for state extension services, but Cornell professors had already taken the initiative and had become unofficial extension agents.

Liberty Hyde Bailey started to mend the communication gap as early as the 1880s, Morris said. "He went out and lectured to farmers. I'd call him the first extension agent." Other well-known early extension workers include Anna Botsford Comstock, A.D. White, and Profs. I.P. Roberts and James Law.

Although Cornell researchers and teachers provided a link between laboratory and field, the farmers were not always willing to learn. Morris identified two major stumbling blocks to helping agriculturists.

For one, farmers just didn't trust extension agents from the University; "book farmers" had nothing to offer farmers who had learned on the land. Agents worked very hard, Morris said, to dispel the notion that a college education made the agents "too different to help." The experiment station planted adjacent comparison plots of a farmer's seeds and the latest hybrid in order to prove the program's worth.

A second difficulty was developing community leadership. County Extension associations were organized to introduce research to the farmers. The farmers, however, were inexperienced in organizational work, and had to be trained to be leaders. "This took time and effort," Morris said, "but it paid off."

Farmers' acceptance had been a continuing problem since the beginnings of extension, and was even identified in an 1897 extension report.

Fortunately, we have been aided by the hard times and the multitudes of bugs and special difficulties. These things have driven people to thinking and asking for things...and now is the time to teach. When one is thoroughly prosperous...there is generally little need of teaching him other methods.

By the Great Depression, Morris said, agriculturists were generally receptive to extension's new ideas. Farmers, homemakers and youths all made use of information being generated at Cornell.

Now, Cooperative Extension helps farmers in farm and estate management as much as it advises on crops and soils. Both Morris and Noble attribute this shift to the farmers, who are now likely to be as well or better educated in farming as the county agents of old. But whether Cornell Cooperative Extension assists in the barn or in the office, the essence of the program is still, as Morris said, "farmers in partnership with the University."
Shallenberger Retires
at Geneva

An internationally known biochemical researcher has announced his retirement, to begin April 1, 1988, ending a 32-year career at Cornell's NYS Agricultural Experiment Station. Professor Robert Shallenberger, currently the chairman of the Station's faculty, plans to continue to live in the Geneva area after his retirement and will provide consultation services to the legal profession. He has also planned two speaking tours of the U.S. for this year, one for the American Chemical Society and one for the Institute of Food Technologies. His research into the nature and content of sugar in foods earned him a full professorship in 1966. His work has taken him to Indonesia, France, Italy and Switzerland, where he acted as a consultant to the World Health Organization based in Geneva.

New Species of Beetle Discovered

Quentin D. Wheeler, associate professor of entomology, discovered a new species of beetle which dines on the slime mold of mushrooms. Wheeler discovered the Agathidium aristernum while walking in Smith Woods in Trumansburg, looking for beetles with an appetite for mushrooms. Wheeler's research involves the evolution of insect-fungi associations. Samples of the slime mold and a few dozen beetles were taken to the Cornell laboratory, where the larvae that hatched from their eggs fed on pieces of slime mold. Wheeler compared the beetles with similar beetles in the Cornell University Insect Collection, and reviewed literature to find enough separate characteristics to constitute a valid species. The discovery of these beetles on the slime mold of mushrooms raises important questions for entomologists. For instance, further study will show whether the beetles transport spores of slime mold to other places where potential hosts are growing, thus ensuring themselves another meal.

Are interactive, computerized instruction programs as effective as human tutors? Education specialists in the new Interactive Media Center hope to answer that question. Digital video, video discs, optical discs and CD-ROM (read-only-memory compact discs) are among the programs to be evaluated.

Geri Gay, MPS '80, PhD '85, adjunct professor of education and director of the new center, said she hopes to show that the introduction of these interactive media into classrooms can greatly enhance both teaching and learning. Gay expects the center will produce at least two interactive instructional programs each year.

COUNTRYMAN
CAPSULES

The American media often presents nutrition information that is confusing, out of context, or even incorrect, explained T. Colin Campbell, a Cornell nutritional biochemist, to a U.S. Senate panel March 1, 1988. The Senate Governmental Affairs Committee is considering establishing a government agency to coordinate research and public recommendations on nutrition and disease. "Too many corporations believe in profit-rich products with very specific health claims," said Campbell, and this "market-place gimmickry out of context" is not helping the consumer who wants to avoid certain diseases such as osteoporosis and cardiovascular disease. Campbell called for an independent panel to regularly review data and to interpret diet information for the private sector.

Student Testing Changes Proposed

Jason Millman, a professor of educational research methodology at Cornell, was asked to comment on a federal proposal to initiate a series of nationwide tests to judge the quality of our schools. Millman, former president of the National Council on Measurement in Education, said that the United States should adopt a national student achievement test and report the state-by-state results so that, in combination with information about the state curricula, results can be used to identify and eliminate weaknesses in instruction programs. The Senate's proposal includes expanding the National Assessment of Educational Progress (NAEP) to test 700,000 students every two, four or six years in various subjects. Millman, in favor of using the NAEP, commented that the Senate's proposal would take the focus off the SAT, and help to standardize testing nationwide, since administrators now often shop around for the test that their students do best on. Also, according to Millman, a test compiled by a representative panel of educators would most likely be devoid of politics.

Biotechnology Think Tank

The Boyce Thompson Institute (BTI) for Plant Research will be the site of the nation's first think tank to examine the impact of biotechnology on agriculture, announced President Ralph W.F. Hardy. The National Agriculture Biotechnology Council, sponsored jointly by BTI, Cornell and Iowa State Universities, and the University of California at Davis, will explore the ramifications of new agricultural technology. Provost Robert Barker will also be a member of the council. Each of the four sponsoring institutions will also select a graduate and a postdoctoral fellow to research issues identified by the council.
Renewed Commitment

As the self-proclaimed "chief cheerleader" of the College of Agriculture and Life Sciences, Dean David L. Call '54, MS '58, PhD '61 brings a lot of enthusiasm to his job. This quality is undoubtedly one of the reasons behind his reappointment to a third term as dean, an unprecedented event not only in the history of the ag college but in the history of the University as a whole.

"I brag about the College all the time. I'm a cheerleader for it," Call said. "I believe it is my job to instill a sense of pride in it and at the same time keep pushing to make it better."

According to the assessment of J. Murray Elliot, Chairman of the Department of Animal Science, Call has been highly successful in his role. "He is a totally loyal Cornellian and an excellent leader for the College. He will be a tough act to follow." Call's third term of office will run for five years, beginning July 1, 1988.

Call's job extends far beyond the supportive role he plays as the College's main cheerleader, however. In business terms, he acts as the ag college's Chief Executive Officer. "Basically, the buck stops here," he said. Reallocation decisions apply not only to money, but also to faculty positions. "Each new faculty member is actually a 30 to 40 year commitment," the Dean said, adding that choosing a person to fill a certain position means making a conscious decision that a particular area of study is important.

The Dean also augments the resources of the College by garnering support from alumni, corporations and the government. Finally, in a more symbolic role, the Dean is a representative

Chief ALS cheerleader, Dean Call.

and advocate of agriculture in New York state.

Born and raised on a farm in western New York, Call came to Cornell in 1950 with aspirations to become a veterinarian. He then decided (or, as he put it, "chemistry decided" for him) to go into general agriculture, with the intention of returning to the farm. The draft interfered with his plans and he ended up earning a masters degree in agricultural economics in 1958, and finally a PhD in ag ec in 1961.

After a brief teaching stint at Michigan State University following his graduation, Call returned to Cornell to become the H.E. Babcock Professor of Food Economics in the Graduate School of Nutrition from 1962 to 1973. "This was quite an honor for a young person like me and I tried to live up to it," he said. Call was then Director of Cooperative Extension for five years before becoming dean in 1978.

Call's history, even as an undergraduate at Cornell, is illustrious. He was a member of Alpha Gamma Rho fraternity, a freshman football player, a member of Ho-Nun-De-Kah Honor Society and the Ag Council and finally, the champion grease pig wrestler for two years in a row. "I retired the trophy," he said.

Since those undergraduate years, Call has seen incredible changes at the ag college. "Looking at just the past 40 years, there is a larger, more sophisticated student body, a more highly trained faculty and an expanded curriculum."

In recent years, Call has been involved in making structural changes at the College to keep up with its other changing elements. By the time Call finishes his third term, he will have initiated almost $50 million of new construction on the ag quad. "It's my attitude that the campus has been changing since it opened, and if this is going to be a modern teaching and research institution at the cutting edge, we need modern facilities," Call said. "I revere the people of this college, not the buildings," he added.

Being able to make a noticeable difference in areas like these and others has given Call the greatest satisfaction of his job. "I can often see the results of my labor, either through a major difference in agricultural practices in New York state or even the Philippines, or seeing a professor we hired win an award." These rewards, along with the opportunity to work with "outstanding faculty members, students and alumni" make his job—even the third time around—exciting and fulfilling. □
ENTREPRENEURSHIP
High-Flying Ideas that Took Off
ABOUT THE ISSUE
Cornell students have caught the entrepreneurial spirit. Student Agencies is prospering and the business school’s course on entrepreneurship is quite popular. We’d like to salute those students, faculty and alumni who have taken the plunge and now manage ventures that range from TakeNote and Madison and Tower to custom-made fishing flies and food cooperatives. Finally, we bring you Irish superstitions and tales of Cornell pranks for crisp October reading. Happy Halloween!

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b.b. kids, a children's clothing catalogue company, is being formed to provide a convenient alternative to shopping for children's clothes. By selling a collection of well-known brand names through a single catalogue, which will be direct-mailed to the customer's home, b.b. kids hopes to eliminate the hassle of taking small children shopping. Brand names like Levi's, Osh-Kosh, and Guess? should add instant credibility to the catalogue; the line will focus on the clothes kids wear most often: jeans, sweats and sweaters.

b.b. kids catalogues will offer the biggest advantage to parents who don't have the time, energy or patience to shop with small children. Crowded department stores and shopping after work or on weekends will be a thing of the past.

Does this sound too good to be true? For the time being, yes: b.b. kids is only a business proposal. How (and when and where) will this whole project become a reality? The best people to consult for the answer are the designers of b.b. kids, four students who are currently taking the Johnson Graduate School of Management course, MBA 300/564, better known as "Entrepreneurship and Enterprise."

Professor David BenDaniel has been teaching the course for three years. He explained, "What this course is designed to do is to really encourage students to think about every aspect of opening, running and profiting from their own business."

The class structure differs from most Cornell courses. The course includes lectures and in-depth case studies, as well as a team business plan. A mix of 185 undergraduate and business school students working in groups of three or four design a complete business and marketing program for an entrepreneurial business venture. Nelly Oliver '88, an economics major who helped design b.b. kids, said, "This class is exciting because you really learn to think analytically about all the details and operations involved in starting your own business."

At the end of the semester each group makes a presentation of its business proposal to the professor and a panel of business experts. Many of the business plans are created with the intention of actually starting the business, and the two best projects in the class designed to be pursued are awarded $5000 grants to help them realize their business plans.

Surprisingly enough, Professor BenDaniel doesn't want to overemphasize the students' projects. He said, "The case studies bring successful alumni who have started their own businesses to class, and it's important for the students to meet and talk with the entrepreneurs first-hand."

In each class, students either hear a lecture or discuss a case study that was distributed a few weeks earlier. Discussions center on the main issues involved in running the case study business, what problems might arise in the future and how the entrepreneur in question should handle certain crises.

For the last thirty minutes of the class, the entrepreneur whose business was described in the case study comes before the class to discuss questions and concerns about his business, and compares students' suggestions with how the business is handled in reality. More often than not, the discussion runs longer than the one-hour course time and moves across the hall where a wine and cheese reception is held. Cathy Polisoto '88 said, "Sometimes I stay until five or six o'clock talking with the entrepreneurs who come in. It's very informal, and I think it's so interesting to get to know them."

"It's a wholly different approach to business education," said BenDaniel. "The class is highly people-oriented. C.U. alumni come in to discuss their businesses and the receptions and dinners that we hold every week really interest the students. They always push themselves in my class."

Bill Barry '75 MBA '89, the father of two active children and the creator of the b.b. kids idea, said, "I found 'Entrepreneurship' to be one of the best B school courses I've taken. I fully expect to use what I learned in MBA 564 to make b.b. kids a profitable enterprise." Look for b.b. kids' first catalogue — the back-to-school issue — in summer 1989. 

by Lisa Ann Pasquale '88
Q: What do you get when you combine the best features of living in a dormitory, a fraternity, and an apartment?
A: A residential cooperative.

Since he has been at Cornell, Eric Winder '88 has tried all four housing options. He considers living in 660 Stewart Cooperative the best of the four worlds, so much so that he ran for and was elected House Manager. "I think there should be more cooperatives at Cornell," he said. "This is ten times better than everywhere else."

Other coop members share Winder's enthusiasm. "They [coops] are probably the best available housing option at Cornell," Dave Hubbell '89, a member of Watermargin, said.

William Kaminski, Manager of Small Residences for the Department of Residence Life, said, "My bias is, they are excellent. Members get to play a very active role in managing their lives."

Cornell residential cooperatives are located in ten large, old, homes both on and off the Cornell campus. Four are situated near West Campus and six in the Fall Creek area. Four coops house women, one is for men, and the rest are coeducational. An average of 25 students live in each house and belong to the cooperative, having applied and been accepted through a procedure that differs from house to house.

Each coop has a different history. Wait Avenue Cooperative evolved from a family-owned residence into a university-owned cooperative for women, according to Kaminski. Watermargin began as an interracial housing unit in 1947, Hubbell said, when no such housing existed at Cornell. It grew into a cooperative and, like most cooperatives, houses students of all races and ethnic backgrounds.

Coops take pride in their diverse memberships; most require only that applicants be dedicated to the group and able to get along well with others. "Variety is the name of the game," Hubbell said. He noted that, like a dormitory, the 24 current Watermargin residents represent every college at Cornell and come from Israel, Singapore, Holland, and other countries.

Watermargin's student-cooked meal plan accommodates a wide variety of palates. Diners designate themselves veggies, meaties, or semis (partial vegetarians), and students cook meals accordingly. The Watermargin meal plan, like other cooperative meal plans, costs less than half of what Cornell Dining's meal plan costs.

Living in a cooperative is inexpensive compared to other housing options. In 1988, Triphammer Cooperative residents paid less than $1,000 per semester for room, board and meals. The economic advantages of coops attract many students who realize the other benefits later.

Coops provide close-knit communities that are reminiscent of fraternities and sororities, but are not as confining as Greek houses, according to Winder. Debbie Haupt '88, president of Triphammer Cooperative, described the experience as joining a large family. Cooperatives house an average of 25 students, a number small enough that people get to know each other well and large enough that one can always find someone to study or have fun with.

Haupt's coop, a women's residence, is close-knit in a literal sense. Members live in singles, doubles, triples, or a quad, but all sleep in a dormer, a large room with 12 bunk beds. Haupt said that the arrangement poses few problems and even has a convenient wake-up system.

Both Haupt and Winder said that in their cooperatives, a large portion of the members, including themselves, are enrolled in the College of Agriculture and Life Sciences. Haupt attributed this to good word-of-mouth communication among students in the College.

Social events are a big part of the coop experience. Houses have parties, both for students interested in joining...
and for themselves. Coops are dedicated to intramural sports. Hubbell mentioned that Watermargin beat out all coeducational teams in volleyball in 1986-87.

Coop living is not all fun and games, however. "Coops involve the responsibility and independence of an apartment," Winder said. As House Manager, he acts as Treasurer and President; he deals with the residence life department, handles student billings and complaints, and runs house meetings.

Cooperative residents take turns doing chores around the house. At Watermargin, chores are called Charlie's in memory of a favorite housekeeper in the early 1960s. In houses with meal plans, students manage the kitchen and cook. "Everyone must be willing to do their share," said Walter Mieher MS '87 PhD '90, a Watermargin resident. He enjoys being able to share cooking and cleaning chores with the other members.

"There's a fair amount of responsibility with living in a coop," Winder said. "It seems like the people who join coops can deal with it, though. Some deal with responsibility better than others, and they become the leaders. If everyone is using common sense, it doesn't take so much to run the house smoothly."

Kaminski views cooperatives as businesses. Students have to manage the house themselves by setting room policies, planning an annual budget, and accruing funds for house improvements. "If there is a problem we will definitely assist them, but we prefer they handle residential situations themselves," he said.

Coop members are just as happy to be left alone. Concerning the Department of Residence Life, Mieher said, "We try to keep them happy and not let them interfere with us too much."

The system has not always existed without conflict, however. In February of 1987, the University's administration informed 660 Stewart and Phillips House cooperatives that they would have to give up their houses to other programs. After a flurry of negotiations, the residence life department allowed 660 Stewart to keep its house temporarily. Phillips House, however, will contain Chi Omega sorority, not the cooperative, come the fall of 1988.

Cooperatives have since formed an Intercooperative Council, in which representatives from each house communicate with each other and the University. The council worked with a committee from the residence life department to write a Policy on Resident Cooperatives that gives coops more say in decisions involving their houses or their residents. On February 29, 1988, President Rhodes approved a version of this policy.

Most important is the message sent to the University's administration and students by last February's conflict. Almost 100 members from different cooperatives attended the Student Assembly meeting that followed the announcement of the administration's decision. Together they portrayed the coops as families and helped the audience understand that they are a unique and attractive housing option on campus.

So if you're a student looking for fun, affordable housing, don't forget about cooperatives. They are perfect homes-away-from-home, offering responsibility and a close-knit group. Kaminski summed up the coop experience well: "What happens in their house day to day and week to week is up to them. That's as family-oriented as you can get." 

by Deanna Troust '89
"Excuse me, mister," peeps a small girl holding up a sparsely decorated container of natural yogurt, "How much is this?"

"Let's go look on the cooler," responds the floorworker, "I think it's on the cooler door." The two go down the aisle, passing bulk food bins by the score that contain anything from nuts, eggs, and granolas to puffed grains and herb teas. "Sexy Sadie" by the Beatles plays in the hustle and bustle of Sunday afternoon, while shoppers politely muscle their way to the selections of bulk olive, sesame, and sunflower oils. Six different kinds of potatoes offer themselves from wooden crates labeled "Dept. Of Pomology." Honeys from summer and fall flowers await passage through the spigots on their containers into shoppers' jars.

These items are not for sale to just any person coming in from the street. These wholesome, natural foods are available to members only—members of the GreenStar Cooperative Market, that is. "GreenStar is great because it is owned and operated by and for the shoppers themselves," said Barbara Goldman, one of the cooperative's eight managers. Located at 435 North Cayuga Street in Ithaca, the cooperative is neither a retail store, a service, nor a profit-making venture. GreenStar personnel prefer to call their store a community.

The idea behind a co-op is that everybody puts in energy and does some of the work so that prices can be low, and policies can be set by informed members. "There is no boss," said Gary Fine, another manager. "The Co-op Council is an elected body that makes policy decisions, by consensus, at semi-monthly meetings. My job as manager is to carry out those policies."

Both managers greatly enjoy GreenStar. Fine said, "I am in a position where I can put my energies toward a system that I really agree with."

The membership of almost 2,000 is substantially comprised of Cornell students and faculty, but the cooperative does business with the Ithaca community at large as well. Membership is a purchased privilege, requiring $4 annually for ten years, as well as a $1 annual processing fee. A two-hour Membership Orientation entitles members to a green, shopping Membership Card, which allows them to shop at the store and pay slightly above the marked low prices.

Members can enjoy further discounts by becoming Working Members, who are at the heart of GreenStar. The basic work commitment is two hours per month, as cashier, floorworker, carpenter, recycler, and more.

GreenStar began in 1971, and, according to Goldman, is one of the few co-ops that remained viable, thanks to its committed work force. "We have what they want," said Fine of the Working Members. "They enjoy the membership participation that GreenStar offers. It is such a change from what they do for the rest of their day. It is almost recreation for them to get out of the library or office and do physical rather than mental work."

Fine is not, however, completely satisfied. "We still have some bugs to iron out. We need more space to carry more of the members' requested products. We need better display methods and better ways of storing items so they are not sold out when the display shelf is empty. These are some of the services we are trying to incorporate into the store."

GreenStar not only provides services for its members, but benefits the community as well. "The ramifications are great," Fine said. "We create jobs for other people by being a large percentage of sales for many local food growers. The same dollars circulate within the community, so the economy is strengthened." The co-op also supports smaller alternative businesses, such as the alternative fund of the Ithaca Feminist Radio Collective, for example, and a downtown soup kitchen called Loaves and Fishes.

If one wants to make loaves, GreenStar has the millet and 12-grain flour. Home bakers can also shop for soy milk or even filtered water, which is right "on tap." And shoppers have the added convenience of a small play area at the front of the store so their children can entertain themselves—unless the kids want to hunt down their favorite flavor of natural yogurt.
There's Decadence In Ithaca

Cafe Decadence, that is. Located in the heart of Collegetown, this cafe is unique to the area. Cafe Decadence is owned and operated by four individually talented friends — two couples — who are all Cornellians.

In September 1987, Steve and Amy Novak and David and Molly Basak-Smith had an idea to open a cafe in Ithaca. They signed a lease in December, and on March 11, 1988, the idea was a reality. It happened that quickly.

Cafe Decadence is really a combination of the best qualities of several cafes. During their individual travels, the four friends encountered a variety of cafes throughout the nation. “We sort of kept our eyes open over a period of months,” said Steve Novak, MS ’88, a graduate food science major in the College of Agriculture and Life Sciences. They collected ideas for prices and for the general decor of Cafe Decadence from places like New York City and California as well as many college towns, he continued.

Using their accumulated knowledge and experiences, the foursome designed and constructed most of Cafe Decadence themselves. Even the layout of the mauve and white tiles on the cafe’s tables was a group effort. The major color scheme is a combination of mauve and grey. Glass blocks hold up mauve counters, laminated for easier cleaning. A bright pink neon sign hangs over the entrance and greets patrons as they arrive at the establishment.

“A customer samples some of the many delectables sold in Cafe Decadence.

Picture of a customer inside the cafe.

‘Everyone had ideas of what it would be like,” said Amy Novak, MS ’90, a graduate student in the College of Human Ecology. “Each person had something he wanted to look a certain way. Consequently, nothing is patterned after one person’s tastes,” she continued.

“It’s more like someone’s home than anything else.”

The foursome met when Molly and Amy became friends three years ago. Instead of fighting amongst themselves, the two couples use their respective talents for the benefit of the venture. “Working with four makes decision-making longer, but better decisions are made in the end,” said Amy Novak.

“All of us take charge of different aspects of the business,” said David Basak-Smith BS ’85, MS ’89. Steve is the day manager of the cafe, Amy coordinates the kitchen, and David keeps the books. Molly Basak-Smith BS ’85, does the ordering, takes care of the inventory, and maintains contact with the outside business world. “Molly is our growth supervisor,” said David. “She keeps us in line.”

The menu of the cafe has something for everyone. Patrons can choose from a wide range of gourmet coffees, espressos, teas, rich desserts, and healthy desserts at any hour. For lunch, Cafe Decadence serves a variety of salads, soups, and sandwiches. The cafe specializes in cappuccino and chocolate desserts.

The patrons of Cafe Decadence are as varied as the fare. “The clientele is very mixed. That’s one of the interesting things about it,” said Amy Novak. The crowd depends greatly on the time of day. Usually, professional people can be found eating lunch in the cafe, while students drop in for late night snacks.

When it first opened, Cafe Decadence experimented with many different food selections. Through trial and error, the menu became more constant. “We have chosen to keep things on the menu that people liked and came back for,” said David Basak-Smith.

The business hours of Cafe Decadence have changed several times since opening day. “We’ve watched how things have been going for the first couple of weeks,” said David Basak-Smith. Experience has taught the owners that staying open past midnight is profitable, since students tend to be late-night snackers.

The students have helped Cafe Decadence find its niche in Ithaca. “We fit in as an attractive alternative to bars as well as a place for gourmet lunches and late-night snacks,” said Steve Novak. The acquisition of a beer and wine license is in the cafe’s near future, he said.

Cafe Decadence is a place where one can go for a quiet conversation and a good cup of coffee in a friendly atmosphere. Even though the owners are expanding the cafe’s menu to include special occasion cakes and frozen yogurt as well as other selections, one thing will stay the same — the atmosphere. As Molly Basak-Smith said, “Cafe Decadence is just what College-town needed. The sky is the limit.”
On December 8, 1986, the biggest problem Dan Miller '89 had to deal with was to prepare for his final exams as a natural resources major in the College of Agriculture and Life Sciences at Cornell University. The next day, however — exactly 45 years and two days after FDR coined the phrase — Miller was faced with his "day that will live in infamy," the biggest test of all. A doctor at Tompkins Community Hospital informed him that at the tender age of twenty, he had cancer.

Miller, having been a football, lacrosse and wrestling standout at Gilman School in Baltimore, Maryland and a highly rated linebacker for the Big Red varsity football squad, was a strong man in every sense of the word, but the news of having cancer shook him.

"I was stunned. I couldn't believe it. I asked, 'Why me?'" Miller reflected. Fortunately, courage overcame self-pity, as the "Why me?" questions were quickly converted into a "What can I do about it to get better?" attitude.

Immediately after diagnosis, Miller's malignant tumor was successfully removed, but the complicated exploratory surgery to make sure that no other cancer cells existed was yet to come in a few weeks.

"The second surgery (a retro-peritoneal lymph node dissection) was risky and had a lot to do with how quickly I would recover," added Miller. "My perspective on life changed immensely; doing well on that exam, making that great athletic play or writing that perfect paper were placed below spending quality time with my friends and family."

On January 2, 1987, a time when most college students were recovering from the holidays and looking forward to winter break, Dan Miller spent five hours in surgery as doctors dissected delicate lymph nodes to check if any cancer cells had spread. Luckily for Dan, the surgeons found abnormal cell growth in only one of the 40 nodes dissected — good news that meant only a slight chance of the cancer recurring. He was placed in intensive care for two days after surgery, as doctors monitored his recovery.

Following surgery, doctors explained to Miller that he would never be able to play football for Cornell again. The tearing of his stomach lining and shock to his internal organs that resulted from the surgery, not to mention the stress that upcoming chemotherapy sessions would have on his body, were too much for any man to overcome in the mere seven month span before the beginning of football practice.

Miller's physique shrank from a hulking 205 to a sickly 165 pounds after surgery. He was in no position to argue with the doctors at the time, but deep inside he knew that he would crunch pads on the gridiron again. "I really wanted to play. I love the program at Cornell, it is a class act from top to bottom," he said.

But the reality of playing football was slim indeed. He took the spring semester away from Cornell to recover from surgery and undergo chemotherapy to insure that all of the cancer was wiped out.

While undergoing chemotherapy at the world-renowned facilities at Johns Hopkins Hospital, Miller needed an outlet from the dismal hospital surroundings with which he had become too familiar. He found it in a coaching position at his alma mater, Gilman Prep. He assisted the varsity lacrosse team while being treated. "I felt that the key to getting through those tough periods was being excited and enthused..."
about something," explained Miller. So in between the sessions of getting his body pumped with poisons in hope of killing off any more cancer, Miller chose not to feel sorry for himself, but to give back to his former high school by coaching.

Miller spent the entire summer of 1987 preparing for the Big Red’s football season. He worked out religiously — six days a week for three to four hours a day in effort to restrengthen his much-stressed body. He used football as a vehicle to bring him back to sound health. "I needed a way to look ahead, a goal, something to put the tough times behind me," said Miller.

Hard work paid off as Miller weighed in on the first day of Cornell football’s mini-camp at 205 pounds. "I was excited and happy. Just the thought of stepping on the field again was a triumph," reflected Miller.

But the ghost of his physical past would soon show its ugly face in the form of injuries on the playing field. Miller’s first mishap was torn scar tissue on his rib cage. Cornell football’s head trainer Bernie DePalma explained, "Dan’s abdominal muscles were weak from the surgery. What he went through took a huge toll on his body and system."

After playing with sore ribs for a few days, Miller tore every ligament in his right thumb while attempting a tackle. As he played on, more parts of his body gave out on him. There was the severe ankle sprain that sidelined him for ten days and the hamstring pull that kept him out a few more days. The body that worked so hard to regain old form just could not handle the stresses of contact football, let alone Miller’s aggressive style of play.

Throughout this adversity, Miller maintained a positive attitude. "He was always thinking present and future and not the past. He accepted what happened and would ask ‘OK, what do I have to do to play ball again,’" DePalma said.

Miller admits that he may have pressed himself too hard to get back to football. "The shell of me was stronger, but the chemotherapy weakened me — I pushed myself back before my body was ready," he said.

Ultimately, in the season’s home opener against Colgate, Miller tore ligaments in his knee on a kick-off coverage — a nightmare for any athlete. But a positive attitude won out over self-pity again.

"I’ve worked in physical therapy for ten years, and I’ve never had a more positive person to work with," said DePalma. "Dan made me realize that it’s the attitude that is more important than the ability of the athlete — he made my season more enjoyable."

After 55 days of knee rehabilitation, Miller suited up for the last week of football practice. DePalma explained that "Most people would have bagged it, but he came back. After watching him, I get sick when I see more fortunate athletes get bad feelings over minor injuries." Miller’s persistence earned him Comeback Player of the Year and the Trainer’s Award at the 1987 Cornell football banquet.

Amidst the hectic football season, Miller took the responsibility of becoming an NCAA Volunteers for Youth (VFY) director. Cornell’s VFY chapter serves to help college athletes get involved with the community by matching them with little brothers or sisters from the Ithaca area that are in need of guidance or just a friend. Miller spent his spare time interviewing potential big brothers and sisters in an attempt to match them with needy Ithaca youths. Also as a VFY director, he helped coordinate activities and raise money for events. "Not often do you get a chance to be involved in an organization that can be so beneficial to others and have such a good time doing it," he said.

Why should Dan Miller take on new challenges, when the pain that he experienced could drive any man into self-pity and depression? "I got sick. I got better, and I got lucky. People helped me get through those tough times, so I’d like to make things a little easier for kids coming from broken families," explained Miller.

Academically, Miller posted a 3.1 GPA for the 1987 fall semester as a natural resources major. He claims that growing up on the Chesapeake Bay has made him more interested in conservation and sparked a desire to become more aware of nature’s problems. Miller seems to have learned how to take things in stride. He said, "The worst prelim or the worst paper I could do is a blessing, when I look back on where I was a year ago."
Serious Business

As the second largest employer of students in Ithaca, Student Agencies, Inc. doles out more than $130,000 a year to its workers. On top of that, it provides excellent management training to a few hard-working students and worthwhile, reliable services to the Cornell and Ithaca communities. With these provisions, SAI continues to deliver on the goals set by its founder 94 years ago.

Student Agencies, Inc. (SAI), the nation's oldest, completely student-run company, was established as an independent laundry and drycleaning service by Seth Higby '96. Since its founding, SAI has expanded to include more than 15 small businesses and a property management organization that owns the Collegetown buildings that Oliver's and Ruloff's restaurants occupy. The organization also owns the newly-erected four-story building at 409 College Avenue where SAI offices are located.

The main impetus behind SAI's creation was to provide jobs to students so they could pay for their education, said Carl Contiguglia '89, SAI president and general manager. Top officers in the firm earn an average of $14,000 a year, which, as SAI secretary and treasurer Greg Parsons '89 pointed out, roughly equals the cost of a year's tuition at Cornell's endowed colleges.

The fundamental goal of the agency today is to provide students with management training, Contiguglia said. Students with no previous management experience may be hired to oversee all facets of any one of SAI's small businesses. "That's one of the great things about SAI," Contiguglia said. "When we hire, we don't look for experience, but enthusiasm, sincerity and drive."

Student Agencies, Inc. managers make all decisions regarding personnel, marketing, production, sales and cash control in their businesses. These businesses include a refrigerator and fan rental agency, which, Contiguglia said, involves a "gigantic time commitment during finals week"; a publishing agency that publishes, among other things, the Cornell temporary phone book; and a shipping agency that transports students' belongings between New York City and Ithaca. Other student needs are met through an overnight typing and resume service, a tuxedo rental agency, a student travel agency and even a poster service that will hang organizations' posters around the Cornell campus.

While most of these agencies serve college students in specific, SAI is currently expanding its target to Ithaca residents — and doing so with success. Its local moving service has taken off, with almost half of its business coming from Ithaca residents, Contiguglia said. And Ithaca High School seniors are turning more and more to SAI for tuxedo rentals.

"Our biggest problem in the past has been the public not taking us seriously," Contiguglia said. "They saw us as a bunch of raggedy students running a semi-serious organization, when, in reality, we are a legitimate company providing extensive services to the area."

By encouraging entrepreneurship, SAI is able to constantly expand the variety of services it offers. A venture fund helps Cornell students start up their own businesses by providing access to SAI offices, computers, management consulting and capital. Businesses launched under the venture fund — including TakeNote note-taking service, Cutting Edge computer rental service, and Visions science fiction magazine — become affiliates of SAI.

"We are interested in attracting the entrepreneur at Cornell," Contiguglia said. "We want Student Agencies to be a place where students know they can get help in starting, operating and funding a new business."

SAI's compound annual growth rate of 200 percent over the past few years underscores the company's ability to expand successfully. Parsons attributes the agency's healthy profit and expansion rates to a strong support structure.

A Johnson Graduate School of Management student, Sharon Dauk MBA '89, acts as the agency's full-time consultant in exchange for payment of her tuition. A Board of Directors composed of current and former SAI officers, local businesspeople and Cornell officials and professors meets regularly to provide additional support, Parsons said. Finally, each manager is paid under a system of profit-sharing that awards them money in addition to their salary if they bring in profits that exceed the budgeted amount.

Employing methods such as these has established SAI as a viable business that generates excellent services, good managers and good will, Contiguglia said. But, he added, "even though we run a serious business, we have a family atmosphere here. We don't let business get in the way of fun."
Noteworthy Success
by Shu Shu Foo ‘88

Most students, at least once in their academic careers, have experienced a predicament similar to that of the cartoon character on the right. Exams are looming closer and closer and, for whatever the reason, students are slipping further and further behind. However, as the student on the left demonstrates, some students have additional help from a note-taking service called TakeNote.

In 1982, Mark Miller ‘85, the founder of TakeNote, was struggling to write down everything his professor was saying. “I’d be jottedting something down, thinking about it, and then I’d look up and the points the professor presented while I was thinking were gone... forever,” explained Miller. “I’d have to find a friend’s notebook to see what I had missed.” And so, an idea was born.

Two years later, Miller enrolled in an undergraduate course in the Johnson Graduate School of Management called Entrepreneurship and Enterprise and formed a business plan for a service that would hire able graduate students to take lecture notes for students. The idea was so successful that Miller and his group presented it at the Entrepreneur of the Year Award dinner. Said Miller, “I was convinced at that point that I wanted to stay in Ithaca and try this idea.”

Bringing the concept to life certainly wasn’t easy. In the spring semester of 1985, the fledgling TakeNote covered five courses for 300 subscribers. Eric Papke ‘85, now general manager of TakeNote, remembered Miller’s hard work that first semester. “He worked completely on his own. That meant all the leg work, all the running around, all the talking to professors, all the hiring, all the payroll, the finances—everything.” Miller worked 70 to 80 hours a week without a salary. To pay rent on his apartment, he ran a Chinese food delivery service on the side.

Despite all the hard work, TakeNote had to overcome a lot of stigmas and doubts. Cornellians were hesitant to admit to professors and even to friends that they were using TakeNote, fearing that others would think they were cheating or just poor students. Miller said he asked a professor to poll his students to see how many were using TakeNote. “The professor asked the class, ‘How many people are using TakeNote?’ Only three people raised their hands.” In reality, said Miller, 70 people had subscribed but no one wanted to admit it.

Today, TakeNote is alive and thriving at Cornell. It has expanded to cover over 30 courses with 3500 subscribers. It employs 43 people, which includes the note-takers, the management and now, an editing team who organizes the notes. The company is jointly owned by a four-person management team: Miller, Papke, Ljubomir Stambuk ’85, who handles professor and note-taker relations and marketing, and Rich Einbinder MBA ‘89, who handles the computer database and financial affairs. And compared to the days when Miller delivered Chinese food to pay rent, the employees now earn a modest salary.

“Our prices are based on the fact that we want a reasonable salary. We want to pay our people for doing a quality job but we still want to be a service,” said Miller, emphasizing that students who cannot afford to pay the $28 per class per semester fee can use TakeNote free at the Learning Skills Center.

The service still arouses some controversy on campus. Some professors, like microbiology Professor Valley Stewart, believe that individual note-taking is part of the learning process. And while TakeNote should be used only as an adjunct to students’ notes, some professors fear it encourages students to stop taking notes or stop coming to class. Other professors encourage their students to purchase TakeNote. Economics Professor Jennifer Wissink said that TakeNote relieves students of “the pressure to get every graph down and every label correct.” The student who buys TakeNote in lieu of coming to class is the same student who would just borrow a friend’s notebook and not come anyway, she said.

Some students have mixed feelings about the service, but most sing its praises. One Asian studies student said TakeNote makes her “a little lazier than I am usually” but said that it is especially helpful for lecturers who can’t speak English very well. A biology major who has been using the service for three semesters said the notes help her learn things thoroughly. “They are more organized and more complete so you get a whole picture instead of just scattered notes,” she said.

Miller has already taken his idea to other colleges, hoping to sell TakeNote to other students who need help jottting down the whole picture. It seems that what began as a small, entrepreneurial venture born of frustration is now achieving noteworthy success.
A Student Ad-Venture

Meetings, concerts, lectures, shows, competitions, fund-raisers and a multitude of other programs occur each semester on the Cornell campus. With bulletin boards and the newspaper personals cluttered with advertisements for one thing or another, it is difficult for student organizations and administrative groups to reach their audiences. Thanks to the ingenuity of several students, Cornell now has its very own student-run advertising agency, Madison & Tower, that has made this a simpler task.

"I came up with the idea in the summer of '87," recalled Alexander Chisholm '89, first president and co-founder of the agency. "After picking up some managerial experience and a partner working at Cornell Adult University, I decided to give it a shot," he explained.

The agency's name was derived by contrasting Madison Avenue, New York City's main avenue for advertising and Cornell's Tower Road, Ithaca's newest avenue for advertising. The agency itself was inspired by conversations with a vice president of D'Arcy, Masius, Benton & Bowles Advertising in New York City, with students participating in Boston University's AdLab, and with Cornell students in search of practical advertising and public relations experience. "The number of students interested in a student-run agency was amazing," said Chisholm. "It pushed me to follow through on the idea."

And follow through he did. Chisholm, co-founder and Vice President of Programming Karin Schwartz '90, and several other students recruited to hold management positions reviewed the 120 student applications they received and interviewed nearly 85 applicants before picking their initial staff of 60.

"One of our biggest challenges in starting up was communicating our concept of what Madison & Tower would be to 60 students from varied backgrounds," remembered Schwartz.

"Clients were very excited about the idea of a student-run, non-profit ad agency," Schwartz recalled. In its first semester of operation, Madison & Tower restricted itself to on-campus clients such as the Cornell Jamboree, Alcohol Awareness Week sponsored by the Dean of Students' Office, the Alumni-In-Residence program sponsored by the Office of Alumni Affairs and an employee recruiting drive for Noyes Center Dining.

"We did little soliciting of clients, since most of them came to us," said Schwartz. "Administrative clients were easier to handle in most cases because they gave us more time around time to produce advertising than did many of our student organization clients." Madison & Tower handled eight clients in its first semester.

Working out of an office in the Department of Communication, Madison & Tower utilizes the resources and faculty of the College of Agriculture and Life Sciences. "Our Board of Directors is made up of university faculty members including Assistant Professor of Communication Carroll Glynn, agricultural economics lecturer Dale Grossman and Media Services Design Studio Manager Linda Haylor," said Chisholm. "The agency is composed of approximately 60 percent ag students and 40 percent students from all of the other colleges combined," said Schwartz. "The ag students are mainly communication majors and some agricultural economics majors."

"Some professors and members of our Board of Directors suggested that we make Madison & Tower into a class in the Department of Communication," said Chisholm, who opposed the idea.

"There is a different psychology that goes on in a class compared to an extracurricular activity," he explained.
"Students get concerned about a grade. If Madison & Tower was a class, the students would lose control. They wouldn't gain the valuable managerial experience you get from running your own business."

"The highlight of the agency's first semester was seeing amazing advertising produced and the results of our advertising in the form of great turnouts at concerts and programs," said Schwartz. "Madison & Tower is a full-service agency that provides hands-on experience and educates students in various aspects of the business and communication fields, building on a strong academic foundation," she added.

"As with any new business, we had our share of problems," said Chisholm. "We had to recognize and deal with a lot of misunderstandings among agency staff members," agreed Schwartz, who will succeed Chisholm as president. "But with our billing system in place and an agency restructuring planned for this fall," she said, "Madison & Tower is looking at a smooth transition into its second year."

The production of an agency manual will accompany the company's restructuring, which will initially take the form of a staff reduction. "The present staff of 60 people will be reduced to 40, including all management," said Chisholm. "We wanted only 40 people from the beginning but since so many students were interested, we decided to give more the opportunity to join. Some people were just not as committed as they seemed," he explained.

"The whole semester has been quite a learning experience," added Schwartz. "It's tough being the boss sometimes, especially when you're forced to fire your friends or your friends' friends."

Madison & Tower held weekly three-hour agency meetings during its first semester in a lecture room on the arts quad. These meetings will be reduced to two hours and will be held in an informal loft setting in Willard Straight Hall," said Chisholm. "This will hopefully increase attendance and make meetings seem less like a class lecture." The agency will also move its office from the Department of Communication in Roberts Hall to the more centralized Willard Straight Hall.

"Meetings will be mandatory for all agency staff," said Schwartz, explaining that many staff members missed meetings because of Monday night classes. "The students we have been recruiting for next semester have been really understanding about this. Some are willing to drop the Monday night classes for which they pre-registered just so they can join the agency," she added.

"Madison & Tower is the type of organization in which you can move up the corporate ladder. You can move from any of the various positions on an account team to account executive to account supervisor to vice president or president," said Schwartz. "You can get as involved as you want. We're always open to suggestions from staff members and encourage initiative." Madison & Tower co-founders Alex Chisholm and Karin Schwartz have certainly made their idea for an advertising venture into a real student adventure.

by Robert A. Rosenberg '88

Reviewing account procedures in the new Madison and Tower office are, from left, Jonah Klein, Karin Schwartz and Michael Selbst.
AN INDIAN UPRISING

Thousands of players have stepped between the lines of Cornell's baseball field over the past century, including future professional stars such as Lou Gehrig and Ron Darling. Perhaps no player has generated as much excitement, however, as Hall of Fame pitcher Walter Johnson when he led the Cleveland Indians against the Big Red on May 16, 1934.

The owners of the Indians, Avery Bradley '05 and his brother C.L. Bradley '08 arranged the team's visit to Ithaca. Avery Bradley was also the team's president after the brothers bought controlling interest in the team in 1928. He was joined in the front office by General Manager Bill Evans '05.

The baseball squad the Bradleys brought to Ithaca was a powerful one. In fact, it was in second place in the American League behind the mighty New York Yankees at the time. The majority of the players who played against Cornell were starters, although a few second-teamers also got a chance to play. Johnson had retired as a player and become manager, but was still the main attraction. He increased the excitement surrounding the game by announcing that he was going to pitch when he arrived in Ithaca.

"I was quite surprised that he threw against us," said catcher Clyde "Red" Johnston '34. "We were all in kind of awe of Walter and he was a giant of a man." First baseman Ben Bradley '34 recalled that Cornell was eager to face Johnson. "We were really up for it, even though our coach was a dour person and didn't have much to say. We weren't overwhelmed playing them but we definitely played on our toes a little more. We had a good team ourselves and finished in second place in the Eastern League that year."

Both Johnston and Bradley said that the Indians seemed to take the game in stride. "They were totally relaxed and played with a lot of professionalism," said Johnston. "It was a day off for them and they were interested in some of our younger players and what we were doing in Ithaca."

More than 4,000 spectators packed the stands and slopes surrounding Hoy Field on the day of the game. "We usually only got a hundred or two hundred people to our games, so it was very exciting to see such a big crowd," Bradley said. Although the spectators were in a festive mood, the players on the field were all business. "There weren't any ceremonies or anything, we just wanted to play ball," Johnston recalled.

The game started in a predictable fashion, with the Indians scoring two runs in the first inning to take the lead. Cornell came right back with a run of their own, however, and in five innings against Johnson, scored four runs with nine hits. The Indians out-scored the Red with 11 runs on the 16 hits.

"Johnson still threw hard, even though he was letting us hit the ball a little bit," remembered left fielder Bill Dugan '35. Johnston was one of the Cornell players who got a hit off Johnson. "I haven't let anybody forget it since then. I was pretty thrilled," Bradley said that it was obvious that the Indians were a very strong team. "They hit the ball with a lot of authority, including a very long home run."

Though the Cornell campus and the Ithaca community were excited the Indians were coming to town, it was Johnson's presence, both on and off the field, that made the team's visit especially thrilling. Ithaca Journal sports-writer Kenneth Van Sickle remembered watching the game as a teenager. "Johnson was definitely the star of the show," said Van Sickle, "and he spent a lot of time before and after the game with kids who had come to the field. He was just mobbed after the game. He also visited a fan in the area who was in a sanitarium with tuberculosis. This received some publicity and reinforced his popularity among the fans." The Cornell players also had high regard for Johnson.

Several members of the Cornell squad that played the Indians, including Dugan, Johnston and Bradley, met in Ithaca on June 10, 1988. They went back 54 years to reminisce the extraordinary game against a pro team. "That game was definitely a highlight in my years at Cornell," said Bradley. "We would have loved to win, but I think we gave them a pretty good game. It was definitely a lot of fun." □

by Guy Leach '88

Captain Tuure (Toots) Pasto poses with Cleveland's great Walter Johnson.

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14
PRACTICING POLITICS

There is no draft. There is no fighting on American soil. There are few pleas from presidential candidates for student support, and many commercials selling pre-packaged leaders. Perhaps Benjamin Ginsberg, a professor in the Department of Government noted for his expertise in American politics, expressed an undeniable point in claiming, "Students are not as actively involved in politics this year as in past presidential election years." But the profile of student activity is complex.

To some students, political participation this year entailed drinking a beer at Dionysos restaurant in Collegetown during a fund drive for candidate Michael Dukakis. For others, political commitment runs deep.

Students who wish to dip their feet in political waters can join organizations such as the Cornell Democrats or the Cornell College Republicans. In addition to many groups which support specific causes, students formed groups to support particular candidates. Still other groups reflect more extremist ideologies: the Cornell Radical Union, Friends of the Spartacus Youth Club, and the International Socialist Organization.

Cornell is not known for its conservative slant. But Chris Hartung ag '90, is not intimidated. Hartung, President of Cornell College Republicans, commented, "We're outnumbered in money and people, but our impact could be potentially greater because we concentrate on electing people to office," rather than on specific issues.

This year students in the organization held a counter-demonstration against a speaker from the Spartacus Youth League, co-sponsored a panel discussion of the Soviet occupation of Afghanistan, and held voter registration drives. Some members, such as Hartung, Chairman of the New York State Association of College Republicans, rallied for candidates throughout New England.

Yet for many students, Cornell's curriculum, along with today's pre-professionalist pressures, makes involvement in other activities difficult. How do Hartung's political activities mesh with his academics? "Sometimes they don't," he admitted. But, he added, "A lot of the education I get here occurs outside of the classroom."

Jeannine Cavender, arts '90, shares this sentiment. Cavender, President of the Cornell Democrats, is active in the Cornell Civil Liberties Union and the track team. How does she keep her status as a College Scholar? "I don't sleep much," she explained.

In the past year, Cornell Democrats brought former presidential candidate Gary Hart to campus, sponsored a debate on Supreme Court Justice nominee Robert Bork, co-sponsored the panel discussion on the Soviet occupation of Afghanistan, and arranged discussions such as "Is America in Decline?" with Cornell professors Walter LaFeber and Peter Katzenstein. In addition, they held voter registration drives and a candidate information forum.

All in all, however, the level of student political activity in the past year was not astounding. Rosalyn Garbose '88, Cornell Coordinator of Dukakis for President commented, "People tend to feel really guilty when they take time out from being at the library."

Ginsberg offered other explanations. "I certainly don't see the student interest or student mobilization that we had a few years ago," he commented. According to Ginsberg, college students "played pivotal roles in making themselves available as campaign workers" for McCarthy in '68 and McGovern in '72. Ginsberg attributes lower student involvement to two phenomena. First, students have not found this year's candidates as appealing as past candidates, and second, candidates this year have made no serious effort to mobilize student support, banking on "high-tech campaigning" such as television ads.

If students show a lack of involvement, apathy is not necessarily to blame. "I don't think students of this generation are any more apathetic than those of other generations. The missing ingredients aren't in students' minds, but in the political process," said Ginsberg, adding that this year there are no big issues like the Vietnam War on which to focus.

Though a large segment of the student population has abstained from political activity, others have found their political endeavors rewarding. Hartung prizes Cornell's climate for providing "good debates and an active exchange of ideas." We might hope for such an atmosphere in the new administration.

by Marianne Wait '89
They spent hours last semester around a table at Rulloff's Restaurant in Collegetown. They planned and organized. By May 1988, they had collected and shipped 65 boxes of badly needed textbooks to Liberia. According to Kelly Westbrooks '91, newly elected President for '88-'89, that's just the beginning for the Rotaract Club of Cornell University, a new chapter of a growing service organization.

Rotaract of Cornell started in the fall of 1987, and is dedicated, like Rotary International, to community service and international understanding. Cornell's chapter is one of more than 5,000 Rotaract clubs with more than 100,000 members in 105 countries. The international Rotaract organization is 20 years old and continues to expand as more young adults become involved in community and international service.

The services Rotaracters provide are varied. Clubs in Malaysia hold food drives, members in Australia record fairy tales for blind children and Rotaracters in Arizona hold an annual fundraising golf tournament. With companies like this, Cornell Rotaract's book drive, although relatively small, emerges as an integral part of a worldwide service network.

Rotaract's motto is "service above self," and clubs take this to heart. Each chapter must sponsor three service projects a year — one each on an international, local and community level. Cornell Rotaract had just begun last year, however, so the members concentrated on one project. "We thought it was important to jump in with an international project to emphasize that service went beyond Cornell," Westbrooks said.

The book shipment project, completed in one semester, required cooperation and hard work from everyone in the small initial group. "Everything from contacting book donors and organizing the collection, to packing the books and making sure they would be distributed in Liberia had to be taken care of," said Uli Keppler '89, the Cornell chapter's founder and first president.

Rotaract members decided to send books because it was a feasible project that emphasized the club's link to the University. "We learned that English-speaking countries like Liberia desperately needed textbooks for their secondary schools. With all the colleges and schools around, books were something we could provide," Keppler said.

Through a Liberian Rotaract member, the club contacted a Catholic mission in Liberia which agreed to distribute the books to the rural schools. Then the Rotaracters asked faculty and schools for discarded books. The response was enthusiastic.

"The faculty and librarians we worked with were very helpful," said Pam Mischen '91, the project coordinator. "We received everything from math books and complete sets of The Book of Knowledge to a box full of 101 Pig Jokes."

Getting those books to Liberia required further inter-club cooperation by Rotary International, Rotaract's parent organization. Rotarians in the three Ithaca chapters that sponsored Cornell Rotaract donated money and helped get the books to Africa.

The book shipment galvanized members' dedication to Rotaract, but the club's value goes beyond one project. Prof. Eugene Erickson, an active Rotarian and chairman of Cornell's Department of Rural Sociology, acts as the club's advisor and liaison to Rotary International. He believes that Rotaract (and Rotary International) combine unique opportunities.

"So much of our lives are wrapped up in very specific things — occupations or classes — that they are limiting. For me it is important to be in an organization that brings in members of many different backgrounds in order to help others when we have the chance," Erickson said.

Francisco J. Frontera '88, the club's first secretary, agreed. "Rotaract gives us the opportunity to provide really relevant services, since we are working within a very powerful international organization. At the same time, the members benefit because Rotaract provides a forum in which one learns how to make people who have different viewpoints work together toward common goals."

Rotaract is expanding both its common goals and its membership this year. As well as continuing the book shipments, it will start local and community projects. The members invite students 18 and over and men and women ages 18 to 28 from all occupations to join. The only requirements for membership, Rotaracters said, are the commitment to service and the desire to make interesting friends.

by Amy D. Crawford '88
Leaders in Agriculture

The Empire State Food and Agricultural Leadership Institute at Cornell University runs an extensive, two-year leadership program to teach participants about issues facing New York’s $24 billion food and agriculture industry. It hopes that each participant will become involved with future issues impacting local, state and national agriculture and food systems.

The institute, sponsored by the College of Agriculture and Life Sciences, the New York State Agricultural Society and Cornell Cooperative Extension, began its second two-year program in November 1987 with 30 participants selected from a pool of 102. Between the ages of 25 and 45, participants are accomplished in their field of expertise, whether it be in farming, agribusiness, government, education or journalism. According to Robert Gravani, director of the institute and associate professor of food science at Cornell University, the members of the heterogeneous group were specifically selected for their leadership attitudes, diverse interests and fields of expertise as well as their locations in New York to broaden each of the members’ experiences and knowledge of other phases of the food and agriculture industry.

The goals of the program are to increase participants’ understanding of New York’s food and agriculture industry, to improve participants’ leadership skills, communication and problem solving abilities and to thereby increase each participant’s ability to effectively represent the industry in future policymaking issues.

How does the program accomplish these goals in the two-year period? The first year consists of seven two-and-a-half day workshops, including a study tour to New York City. Trends and characteristics that affect the food and agricultural industry, such as shifting consumer demand and demographics, advancements in biotechnology and changing techniques in production, processing, marketing, wholesaling and retailing are of prime concern in the first year.

The April 1988 trip to New York City gave members a perspective on how the food system comes together in a major metropolitan area. Participants from rural areas had opportunities to examine a completely different system where complexes such as the World Trade Center serve 25,000 meals per day.

Participants studied economic trends at the Morgan Guaranty Trust Company and effects of legislation on the farm credit system at the Federal Farm Credit Banks Funding Corporation. They were exposed to how the United States Food and Drug Administration regulates food imports coming through the Port of New York and the role of the Port Authority in food trade. The group attended sessions discussing the roles of Cornell Cooperative Extension in New York City, of a terminal market in produce and meat distribution and of a specialty baker in the urban setting.

Experiences such as these serve to broaden participants’ knowledge of the entire state’s food and agricultural industry.

Communication, leadership and problem solving skills are honed during the entire process. Now and in the future, members must communicate as effective leaders in a persuasive, credible, assertive and tough-minded manner. Seminars within the seven workshops seek to identify effective leadership styles in written and oral communication, as well as to educate participants about proper use of audiovisual aids in presentation, to develop creative problem solving techniques and to improve effective listening skills. Faculty from all over New York and other representatives of the food and agriculture industry are called upon to present information to the institute. Class members actively participate in and evaluate each program.

The combination of effective leadership strength and a broad knowledge of the state food and agricultural system prepares participants for the second year of the program, when they use this information to study future growth and change, public policy issues, legislation or policy-making processes and means for change and development relative to the food and ag industry.

In the upcoming year, the group will travel to Albany to study state policymaking procedures, to Washington, D.C. to examine national procedures and to an as yet unspecified site to study and compare its food and agriculture industry to that of New York.

As this class begins its second year, plans are being made for the third leadership program. The institute will begin its call for applicants in the spring of 1989.

The Empire State Food and Agricultural Leadership program participants will be prepared to represent the multibillion dollar food and ag industry as effective, knowledgeable communicators able to change that which needs changing, communicate that which needs communicating and educate those who need educating in order to keep the industry up-to-date and productive.

by Tallulah Bankhead '89
A 1950 Cornell Alumni News editorial declared that students "seem bound periodically to do something which upsets the administration, annoys the professors, and arouses the alumni." and Cornell students have always done their best to fit that description. Whatever spark ignites inside young people, prank when the potential is for someone to get hurt, or it offends the sensibilities of someone."

It is not always clear just when that line is crossed. And if students misjudge what the community will tolerate, things can rapidly turn serious. Such was the case on May 28, 1952, when masked students invaded campus radio station WVBR and announced that the Soviet Union had attacked Marseilles and London, and that unidentified "Russian-type" planes were approaching the U.S. Listeners who followed the broadcast to its conclusion were advised that it had been a prank, but the campus was plunged into "absolute turmoil," said David L. Call '54, dean of the College of Agriculture and Life Sciences. "It was a hell of a prank."

The culprits voluntarily confessed the next day, and although they made public apologies, the Faculty Committee on Student Conduct ruled that evening to suspend all 25 participants for two terms. Four days later, however, the committee announced that "in the light of additional information" the penalty would not be enforced.

The campus erupted in a furor. Many people felt the culprits received leniency only because many were members of honor societies, varsity sports teams and popular fraternities. WVBR's wire service picked up the story — not a Russian invasion, but of the college prank. People around the country were livid and demanded that the students' names be released and the case be turned over to local courts. The students remained anonymous, however, and although the FBI and the FCC got involved in the case — there was some question whether WVBR should be allowed to keep its broadcasting license — the University maintained jurisdiction. What had started as a prank had swiftly snowballed into a serious situation that no one anticipated.

The student media has also been a source for pranks ingenious enough to amuse people while steering clear of any real harm. The Cornell Daily Sun has traditionally put out a hoax issue once or twice a year. In the early days these papers would carry names like the Cornell "Wrongly Run" and "Daily Fun," but later parody issues carried fake stories under the real mast. "The headlines always rocked you a little bit," Call said. "It would take you an hour or so to figure it out."

In 1964, a banner headline caused quite a stir by announcing that the University had abandoned construction plans for Olin Library because geological studies had indicated such a structure would sink gradually into the arts quad.

But the Sun carried off its bravest prank in February 1965, when Cornell faced Princeton for the Ivy League basketball championships. Sun editors worked for weeks to produce an exact replica of The Daily Princetonian, following the legendary example of past editors who parodied The Harvard Daily Crimson in 1958 and The Syracuse Daily Orange in 1954. In late-night maneuvers which managing editor Sol Erdman '65 described as resembling a Keystone Cops movie, an adventurous group of Sunnies managed to replace every real Princetonian with a bogus issue, missing only the copies destined for the administration building and the Princetonian's office.

Princeton students awoke to discover that the university's star basketball player had sprained his ankle and could not play in the game. (The star player was Bill Bradley, who went on to play for the Knicks and is now a member of Congress.) Another fake story announced that Cornell Prof. Arthur Mizener, an expert on F. Scott Fitzgerald, had received and now labelled Fitzgerald a "minor hack." Another headline declared that in his memoirs, Winston Churchill blamed Woodrow Wilson for prolonging the first World War unnecessarily.

"It was Princeton icons being taken
down,” explained David Lipton ’66, a member of the Sun editorial board. Fitzgerald was Princeton class of ’17, Mizener graduated in 1930 and Wilson had been president of Princeton before holding that office for the nation.

The icing on the cake was that Cornell president James Perkins (Princeton ’37) knew about the switch in advance, and “ate it up,” Erdman said. He personally presented a copy of the bogus paper to Princeton president Robert F. Goheen, who was visiting Cornell that weekend and staying at Perkins’ home.

The Sun had pulled off a successful caper and given two university presidents a good laugh, all without crossing the border between prank and penal code violation. But not all Cornell pranksters have been so adept. The rivalry surrounding the annual freshman banquet spawned a host of pranks in the late 1800s, but the tradition has faded, probably in the wake of pranks that got out of hand one too many times.

Each spring, sophomores would kidnap freshmen, preferably class officers, to keep them from the banquet, or trick the caterers into serving the banquet in another location. But such playfulness periodically took a turn for the worse. In 1880, sophomores tried to spoil the freshmen’s fun by depriving their banquet of light. Their alterations of a gas jet could easily have caused asphyxiation or an explosion. In 1888, a freshman fired a revolver while repelling sophomore kidnappers. In 1894, sophomores tried to interrupt the freshman banquet with chlorine gas. They accidentally released the fumes into the kitchen instead of the banquet hall, which killed the cook. Unaware of the fatality, the freshmen continued their festivities until 3 a.m.

For the most part, though, Cornell’s pranks have been annoying at worst. In the spring of 1878, students broke into the Sage laundry facilities, plucked assorted undergarments from the wash-

In 1905, a mock bullfight on Spring Day prompted many angry letters from animal lovers after a local newspaper reporter mistook a decorated wheelbarrow for a real bull.

ing tubs, and hung a selection of them out to dry from the steeple of Sage Chapel. It may have been the first panty raid ever, according to Morris Bishop in A History of Cornell. A student in the class of 1941 won a bet of $8.00 by swallowing a live goldfish, only to be outdone by a Cornellian two years his senior who swallowed four fish in a hotel lobby in New York City.

One night in finals week of 1952, pranksters clad in white coats began sweeping up the Trihammer bridge, and succeeded in closing it to all traffic. Cars were backed up on East and University Avenues, and several women sat anxiously beside their dates as curfew “sign-in” time for the north campus women’s dorms came and went. And then there was the old standby: greasing the trolley tracks, thereby sending the next car down the hill with “some noteworthy and undesired coasting,” according to Romeyn Berry ’04 in Behind the Ivy.

The activities of pranksters seem to ebb and flow with national trends. In a History of Cornell, Bishop wrote that after each World War, returning veterans brought new seriousness to the campus. Call agrees, and pins another wave of seriousness on the student activism of the 1960s. “Students became more serious, and, I hate to say, less imaginative.” Pranks seemed better left to high school students. Call also posits a more simple explanation for the apparent waning of large-scale student tricks: “Maybe these things were possible only when you had a smaller institution.”

The annual report for the University’s first year includes a category for “Malicious Mischief” totalling (a bit inflatedly) over $4,000 — a significant bite out of the $100,000 operating budget. Today, there is no such ruler to measure pranks by, but the tradition no doubt continues. As Berry pointed out in Behind the Ivy, “the Sophomore Class seems likely to remain nineteen years old through the ages and subject here and there to acute attacks of deferred adolescence.”
Cardiac pulmonary resuscitation can be just as crucial a procedure in saving the lives of animals as it is for humans. Although the need for CPR as a result of heart disease is not common among animals, they, like afflicted humans, can die quickly if CPR treatment is not available.

A device developed at the New York State College of Veterinary Medicine at Cornell University has become increasingly more important over the past five years in educating thousands of veterinary students and animal health technicians across the country in the teaching of CPR techniques. In fact, it is now used in most veterinary colleges and training programs in the United States.

"Resusci-dog," invented in 1983 by Dr. Charles Short, who teaches anesthesiology at Cornell's vet school, is a rather furry plastic model of a dog. It is electronically sensitized to respond to proper and improper sequence, timing and pressure applied by humans trying to restore cardiac pulmonary activity. The mannequin's wire "nerves" show up as lights displayed on a control panel - much as they would in the operating room. Students learn to coordinate their manipulations with responses indicated by flashing lights and warning buzzers.

Dogs need CPR after experiencing heart and lung failure that is most often due to accidents, drugs, shock, or the combination of anesthesia and surgery. Practicing the rhythm of chest compressions, ventilation and the proper steps of CPR on Resusci-dog prepares veterinary students for its use on live patients.

One of the primary objectives of developing "Resusci-dog" was to provide the same advantages that the Red Cross or local rescue squads supply in their teaching programs with the use of the human CPR model, Resusci-Annie, said Short. So as not to seem biased or appear to provide special care for any one breed of dog, the mannequin was designed to look "non-descript," he said. Its size, shape and coloring are generic. Non-discriminatory medical care is an important philosophy of the vet school.

The major result of Resusci-dog's widespread use is the overall improvement in education, said Short. Besides specializing in anesthesiology, Short is a dedicated teacher of the subject; it was this concern for providing a thorough education that really prompted the invention. "Theory, practice with inanimate objects and experience with live animals are all utilized to provide a balanced education," Short said. "To put all the tremendous amount of knowledge that has been accumulated over the years into a form that can be made available — part of it committed to memory, part of it committed to 'I know where to find it', part of it 'I need to re-practice', part of it 'I will see over and over' — constitutes our combined methodology in education."

Animal health technicians are finding Resusci-dog indispensable in giving them a better understanding of the technical skills involved in CPR as well as giving them a chance to refresh their skills. Technicians are the "nurses" of the veterinary profession, assisting the doctor in actual surgery, administering anesthesia and monitoring the patient, and providing pre- and post-operative care. For them, the mannequin is a way to practice skills on their own at any time. In the past they would have been limited to life-threatening situations in order to apply their theoretical knowledge of CPR.

"Mannequins can never completely replace live animals in the training of veterinarians," said Short. But plastic models do provide the necessary amount of instruction without increasing the number of live animals needed or the costs associated with providing live patients. In addition, "Each time we are able to teach (with our combined methodology) a little better, then each person who receives that information is in a position to reduce losses in the animals they see," Short explained.

The total number of lives that can be saved by proper application of CPR techniques can never be known, but Resusci-dog has become part of the educational process vital in producing competent, qualified veterinarians with assistants who are similarly trained. Every attempt is made to provide a thorough education for these future professionals so that families can rest assured that their pets are receiving the best care possible.
Tying flies for the sport of fly fishing is an art form as well as a hobby. The challenge of putting together hooks, line and carefully selected feathers that will persuade a fish to take a bite, has made fly tying just as sporting as fly fishing itself.

Graduating seniors from Cornell would jump at the opportunity to turn a hobby into a highly profitable multi-million dollar business. However, most turn to corporate life, as sleeping late, watching television and drinking beer are tough ways to make a living. After earning his degrees, Buck Metz '63 and '64 was no different. He went to work for Procter and Gamble in Cincinnati buying boxes and toothpaste tubes. Two years later, Metz was convinced that he wasn't cut out for the corporate life, so he brought his wife and three kids back to the family farm in Belville, Pennsylvania.

The Metz family is in the chicken business. Metz Hatchery, Inc. has sold chicks to farmers who raise them for meat for over three generations. After Metz joined his father in the business, he spent most of his free time playing golf at the local country club. Frustrated by the game, Metz looked elsewhere for leisure. A friend invited him to go fly fishing and he became hooked. "I just loved it," Metz said. "I spent the rest of the summer fishing for trout."

Interested in tying his own flies, Metz invested in some of the necessary materials, but could not bring himself to buy feathers. "With so many chickens running around the place, I just couldn't see spending good money for feathers somewhere else," he said.

But the family chickens had hackles (neck plumage) that were not suitable for tying flies. Enthusiastic about his new hobby, Metz began to raise a few choice birds for the sole purpose of their quality neck feathers or hackles. They were of better stock than the farm chickens for they possessed gray, short-fibered, stiff feathers on their hackle — ideal for tying flies. Metz's chickens were quarantined to the basement of his home to prevent them passing disease to the chickens in the family operation.

Pastime turned to passion as Metz accumulated hundreds of birds for their hackle. Friends sought after the high quality feathers, forcing Metz to expand his hobby. After his father suggested that the inedible birds start paying their own way, Buck Metz decided to plunge full-time into the hackle raising business.

Despite praise coming from the local fishing community, Metz was not sure he had a blue-chip product. So he packed a bag with his best hackle, hopped on his motorcycle and headed to New England to show his goods to the retail fishing equipment shop of the Orvis Company.

The clerk at the shop was so pleased with the goods that he had Metz in the office of David Kashner (then in charge of purchasing fly tying materials) within minutes. Kashner bought all of the chicken necks and made an order to purchase 1500 rooster necks for the following spring and an order for 3000 more to be delivered the year after. Buck Metz's passion had finally become profitable!

That was over 15 years ago. Today, Metz's hackle business is doing better than ever. With a worldwide market share of roughly 85 percent, his birds have found their niche in the market — and the demand continues. Next year, Metz plans on raising 100,000 birds for their hackle to meet the growing demand. Having moved operations out of the basement, Metz uses over a dozen buildings to hold the prized roosters. Two serve as brooding houses where the birds stay for the first twelve to fifteen weeks and five cage houses hold them for the next twenty weeks while their plumage matures. In the finishing houses, each rooster is confined to its own cubicle, tightly meshed to prevent him from sticking his head out and damaging his valuable plumage.

How does the Metz hackle fare against the competition? A top-quality Metz neck will sell for $50 retail, while a top-grade imported neck from India sells for about one-fourth as much. Metz attributes some of his success in breeding roosters to the animal science and genetics courses he took at Cornell.

Studying genetics in Cornell's College of Agriculture and Life Sciences must be in the Metz family genes, for his son J. Michael, a 1984 ag college graduate, is currently enrolled in the Virginia Tech Veterinary School after successfully completing a master's degree in genetics from the same school.

Metz necks are sold all over the world. There are Metz distributors in Canada, England, France, Germany, Holland, Japan, Australia and New Zealand. With hackle sales grossing over $1,000,000 last year, Buck Metz can only hope that, through the aid of his genetic and poultry knowledge, more birds with his feathers will flock together.

by Joe Lizzio '88
Do not shun the God of righteousness and make compacts with demons. — Ancient Irish poem

The lush, rolling hills of Ireland are steeped in centuries of superstition. Although modern Irish people in large cities treat superstition as merely folklore, people in small, isolated farming villages still use superstition to explain mysterious events.

“I’ve talked to people from rural areas in Ireland who swear up and down they’ve seen demons or ghosts,” said Rich Stone, ag ’88. Stone attended Trinity College in Dublin last year through the Agricultural Exchange Program. While travelling through rural Ireland, Stone became interested in ancient superstitions. He is compiling his research on Irish superstition into a book entitled Pitmirk, the Scottish Gaelic word for intense darkness. “Although people in major cities like Dublin view superstition like we do, isolated villagers are still superstitious in the old way of their ancestors,” said Stone.

Instead of Halloween, rural Irish folk observe Pouca Night, sometimes called Hallowtide. Pouca (pronounced Pooka) is the general name for all supernatural beings, including demons, witches, changelings, and hagbogoblins. According to Stone, “Villagers disguise themselves like witches, ghosts and fairies as protection against evil spirits.”

Burning hazelnuts over a fire to read the future in the smoke is a traditional Pouca Night ritual. “Some people believe if you arrange chicken bones in a circle and put fresh lamb meat in the center, you can conjure up a demon to sic on your enemies,” Stone said.

On November 1, the Irish observe the Feast of Samhain, the ancient Irish word for November. Villagers eat brack — cured, year-old bread — and light candles to appease the souls of the dead. Stone said that the Feast of Samhain is basically a celebration of relief that Pouca Night has passed safely.

The threat of evil spirits is not reserved for Hallowtide, however. The Irish are constantly aware of ill omens, events which foretell disaster or merely bad luck. One of the most common warnings of misfortune is a black dog or hare seen at night. A magpie seen during daylight and a cock that crows while the sun is high also promises disaster. “Some people I spoke to sincerely believed that it was bad luck to kill a cat. Killing any animal after dark is supposed to make unnatural beings very angry,” said Stone.

Even worse than ill omens are death omens, which foretell the death of the person who sees them. A falling picture, four magpies seen together, and crickets chirping at midnight are events which are said to bring death to those unfortunate enough to witness them. “One old man told me that dreams of meat, white stockings, or the loss of an eyetooth meant you were going to die soon,” said Stone. “A loud buzzing in your ear and hearing a cuckoo while facing a graveyard are also believed to be signs of death.”

In Ireland, very heavy fog often covers entire villages. “Some days the fog got so dense I could understand how people could see evil spirits or ghosts in it,” said Stone. In ancient times, some fogs were believed to hide evil demons. Many villagers still believe that very thick fog is the souls of deceased Irish exiles who died outside of Ireland. “Fogs which appeared during certain times of the year were considered to be ‘unlucky,’ and brought misfortune to the entire village they covered,” said Stone.

Besides fog and omens, the main force in Irish folklore responsible for evil deeds is the Devil and his servants, the demons. The Devil has many names, including Digle, Divil, and Old Nick. The Devil’s “lieutenant demon” is called Caorthinch, who “oversees demon activity,” said Stone. Irish superstition maintains that demons can spy on humans by entering the bodies of animals, including house pets and farm animals.

“Demons and the Devil are the opposites of God,” said Stone. “The Irish manage to combine strong religious beliefs with equally strong superstitious beliefs. Although most Irish people today take superstition with a grain of salt, I think some of them will always be a little leery of a heavy fog.”
ASHS Honors Dickson

- Dr. Michael H. Dickson, a vegetable crop breeder and researcher at the Geneva Experiment Station, was one of six scientists in North America this year to be named a Fellow by the American Society of Horticultural Science (ASHS). Among Dickson’s many accomplishments are research efforts into the improvement of New York state crops of snap beans and crucifers (cabbage, broccoli, brussels sprouts and cauliflower). Some of his significant results include insect-resistant and higher-solid cabbage for sauerkraut, and cold-tolerant and disease-resistant snap bean lines.

Cornellian Writes Cookbook

- What’s the newest and most intelligent cookbook available? The answer is The Craft of the Country Cook, written by Pat Katz ’56 after 11 years of testing and tasting thousands of recipes. The widely read kitchen columnist has created a 730-page, indexed and alphabetized cooking “treasure,” full of her favorite recipes from every ethnic source in North American cooking. The 177 sections give a basic understanding of foods and cooking processes, and the pages are designed for quick and easy kitchen use. Not only has Katz written a joyful cookbook, but she teaches courses on gardening and cooking as well. For more information about her book or about her classes on country living, contact Pat Katz, RD 2 Box 233A, Pine Bush, New York 12566.

COUNTRYMAN
CAPSULES

Revolutionary Research at Geneva

- A $267,000 grant from Eastman Kodak Company of Rochester, N.Y. will fund research on seed protection and seed-coating technology using revolutionary methods developed at the Geneva Experiment Station. Scientists have found that the use of common and non-toxic fungi “protectors” on various types of seeds not only protects the seeds from natural biological enemies, but improves growth as well. Once developed, the new technology could replace the traditional chemical treatments, which have recently come under the scrutiny of the EPA. Not only does the new method protect the seeds better than when chemical methods are used, but the roots of the plants also show an improved level of protection. And, in some cases, plant growth is doubled. Experiments will take place not only in New York state, but in Texas, Florida, Mississippi, and Idaho as well.

Researchers say that the trial data could be submitted to the EPA for review by as early as 1991.

- Professor Dale E. Bauman, professor of nutritional biochemistry in the animal science department, was one of two Cornell professors recently elected to the National Academy of Sciences. He is one of 61 new members elected to the academy this year. Bauman, the Liberty Hyde Bailey Professor of Animal Science, began the use of bovine growth hormone in boosting the production efficiency of dairy animals.

- Physics Professor John D. Reppy, the other Cornell electee, has made major contributions to the field of experimental low-temperature physics. The academy was established in 1863 by Congress to advise the government on science and technology.

• The ASHS also honored Dr. Robert C. Lamb and Dr. Norman F. Weeden as co-authors of a prize-winning scientific paper, which was one of four selected as the most outstanding agricultural papers published in ASHS journals for the year. The paper explores the genetic background of apples through the study of their molecular character using isozyme analyses. Lamb and Weeden conduct their experiments at Cornell’s NYS Agricultural Experiment Station at Geneva.

• Outstanding graduate students studying in the Department of Poultry and Avian Sciences can now receive financial aid through a new graduate assistantship established by the department. The first recipient of the Summers-Scott Graduate Assistantship is James Fleet of Smithtown, N.Y., a Ph.D. candidate in nutritional biochemistry. Fleet is focusing his research on the role of a zinc-binding protein called metallothionein, which may play a role in curbing bacterial infections in chickens. According to Fleet, this protein makes the trace element zinc less available to infectious agents. The assistantship is valued at $14,476.

It was named after Meade Summers ’26 who donated $139,400 in stocks and cash to Cornell and Milton L. Scott, who retired in 1981, becoming a professor emeritus of animal nutrition.

Dr. Michael H. Dickson, who was honored by the American Society of Horticultural Science.
Underwater Harvest

by Robin Barker '89

In order to reduce the risk of coronary heart disease, many Americans are beginning to realize the health benefits of changing their diets. As a result we are eating more fish and chicken. Although demand for fish products is rising, ocean and lake catch is staying constant. Instead, imports are meeting the demand to the tune of $4 billion per year in aquaculture products, one of the largest commodity contributors to the U.S. trade deficit.

Cornell researchers, aware of this rising demand for fish and the lack of domestic ability to meet the demand, started looking for a solution. William D. Youngs, a professor of fishery science in the College of Agriculture and Life Sciences’ Department of Natural Resources, and Michael Timmons PhD ‘79, an agricultural engineer at Cornell, co-directed a study to find a way to raise fish more efficiently.

The solution they found is an indoor system that allows a large number of fish to be grown utilizing a high-percentage water-recycling aquaculture system. Aquaculture is underwater agriculture that allows the cultivation of fish and other marine life in a controlled environment. “With this system, fish can be grown in large numbers near population centers rather than where suitable natural water supplies exist,” said Youngs.

Existing systems also re-use water, but Cornell’s system is more efficient, re-using nearly 100 percent of the water. “We replace .01 percent of the water per day, which means only a few buckets,” said Timmons. “You normally wouldn’t associate aquaculture with Arizona or Saudi Arabia. The thing is with re-use you wouldn’t be using too much water. It would probably be more appropriate than growing vegetables in Arizona because vegetables take large quantities of water on a daily basis.”

The Cornell study involved designing a re-use system and testing it over a nine month period. Cornell’s Animal Science Teaching and Research Center near campus housed the prototype operation. Ten thousand brook trout and Atlantic salmon were raised from four-inch fingerlings to a market size of 10–12 inches.

Cornell researchers support specialist Glenn R. Snapp nets brook trout grown in an indoor fish-farming system.

The fish were then successfully test marketed though seven Wegmans supermarkets in the Syracuse area. “When you think of salmon, you think of big salmon steaks. We were test marketing these 12 inch salmon. The research group thought they wouldn’t be received well, but they actually sold better than the brook trout. These tank-reared fish look and taste fresh. They are very attractive looking fish,” said Timmons.

Reducing the time between producer and market gives the consumer a fresher, more attractive product. This is only one of the system’s advantages, however.

Other advantages include a lowered risk of disease and pollution, as the fish are raised in a controlled climate. “One of the major detriments in buying fish is the legitimate concern that there are contaminants in the fish — metals or PCBs [polychlorinated biphenols, a highly toxic carcinogen]. One of the big advantages to aquaculture is that you can guarantee the purity of the fish. We can guarantee contaminant-free fish,” Timmons explained.

By controlling the temperature and rate of feeding, the growth rate can be regulated. Through this regulation a consistent supply of high-quality fresh fish can be assured.

The re-use system has a potential environmental impact. Many of the existing fish farms use a flow-through system; waste products are flushed into natural lakes, streams and ponds. The result is phosphorus-loading on these areas which causes excess algae and vegetative growth. “It’s pretty clear that they’re going to have to do something. One way of controlling discharge is though re-use,” said Timmons.

Timmons does not see commercial fishing being threatened by aquaculture. “I think it will help it. Ocean catch is not consistent, so consumer consumption is not consistent. Aquaculture provides fish on a constant basis, so consumer demand will respond. Wild catch would go in the specialty produce: a premium product at premium prices,” he said.

“The ultimate goal of our work is to promote a large-scale aquaculture industry in New York state and elsewhere in the country. The work we have done thus far represents a major step toward that goal,” Youngs said.
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About the Issue

The Cornell Countryman is a publica-
tion put together by students, and in
this issue, we take a look at aspects of
the student population at Cornell, and
issues which affect it. Inside you will
find stories involving new students,
former students, and foreign students.
You will read about people, courses,
and institutions that affect student life
at Cornell, and on the back cover, you
will discover some insight into what
brings students here. So read on!

On the Countryman's New Look

If this issue looks a little different to
you than past issues, it's because we've
had a facelift. We have a fresh, new
nameplate on the cover that is, we
think, bolder and more contemporary
looking than its predecessor. Similar-
ly, the magazine's interior has been
redesigned. The table of contents and
capsules pages have a new format, the
feature articles are now typeset in a
typeface called Garamond—we think
it's especially attractive—and the cap-
tions and bylines have a new graphic
treatment. Lorraine Heasley, a senior
graphic designer at Cornell's Media
Services, helped us create our new
image. We're pleased with the changes
and hope our readers are, too.

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It is the policy of Cornell University actively to support equality
of educational and employment opportunity. No person shall
be denied admission to any educational program or activity
or be denied employment on the basis of any legally prohib-
discrimination involving, but not limited to, such factors as race,
color, creed, religion, national or ethnic origin, sex, age, or
handicap. The University is committed to the maintenance of affi-
native action programs which will assure the continuation of
such equality of opportunity.
How can people do everything they want to do in their life and career without going crazy?

"You don't sleep, you have no time on your own, and you have to be incredibly organized," according to Dale A. Grossman '72. Grossman is a lecturer in the Department of Agricultural Economics and the Department of Communication, a wife and mother of two, a lawyer, an advisor and a member of many other organizations on and off the Cornell campus.

Despite the scope of her activity, Grossman says she does not do it alone. "I learned to say no and to delegate," she said, "You can't do everything. You reach limits."

Raised in Lakewood, N.Y., Grossman is the oldest of five. Her parents both graduated from Cornell, so when it came time to decide on a college, Cornell was the natural choice. "My parents were engaged on the suspension bridge, and my mother used to sing me to sleep with the alma mater," Grossman said.

A student in the College of Arts and Sciences, Grossman majored in social relations, which "is a combination of sociology and anthropology." In her senior year she decided to apply to law school. Her father, William Arrison '48, JD '50, was a lawyer and had some influence on Grossman's decision.

Having been unsuccessful with her first applications, she entered the Institute for Paralegal Training in Philadelphia for a 13 week course. After graduation, Grossman found a job with a Washington, D.C. based law firm, and while working she applied to the Washington College of Law at the American University.

"For the first year I went to night school and continued through the summer," Grossman said. In her second year she went part time, and during her third year she was a full time student. Looking back on the experience Grossman said "I wouldn't wish that upon my worst enemy."

While in law school, Grossman met her husband, Peter in line at registration. They married in the summer of 1976 and returned to Ithaca to study for the bar. "Peter had a job offer in Ithaca, so it was natural to come back."

After passing the bar, Grossman took a position with Cornell as Judicial Administrator in July of 1977. This was an occupation she found "interesting and challenging overall but a negative experience. Someone was always being punished for doing something wrong."

Grossman was in the middle of her second term as J.A. when she took a part-time position in the Department of Communication Arts as a lecturer to teach Communication Law. With this change, she found the experience of interacting with students more rewarding. "That's the great thing about teaching," she said, "being able to work with a student in the creative process."

Soon, a full-time position in the Department of Agricultural Economics became available. She was given the job with the contingency that she continue to teach communication law. "They needed someone to teach comm. law but they didn't need a full-time lecturer. That's how I ended up a lecturer in both departments," Grossman said.

Grossman teaches Communication Law, Taxation, Business Law, and Agricultural Law. Of these courses, Communication Law is her favorite to teach. "It has the best subject matter, is the best size, and attracts the best mix of majors," she said.

In her eight years of teaching at Cornell, Grossman has been involved with much more than classroom experience. She has been an advisor to numerous student organizations, including The Cornell Daily Sun, the women's basketball team, Kappa Kappa Gamma sorority, the Cornell Chapter of the American Civil Liberties Union, the Business Opportunities Club and the Student Management Corporation.

In addition to these activities, Grossman also advises an average of 60 students a year. "It's the most fun of anything I do." Her advisees can see that from their contact with her. "One semester I had to find another course to take to fill a requirement, and Dale and I discussed my options and came up with something I really enjoyed," said Jennifer Cochran '90, her advisee.

In addition to all of the commitments she has, Grossman is the mother of two boys, Samuel and David, who in July turned 6 and 1, respectively. The pressures of being a career woman and a mother are easier because of the teamwork between her and her husband. "I would hate to be a single parent," she said, "I couldn't do it alone. Peter helps out a lot."

These are the facts, but the question has yet to be answered. How does she do it all? "I gave up trying to be a gourmet cook long ago," she said with a smile. "We eat out a lot. They know us by name at Mexicali Rose and the Souvlaki House!" Well, one cannot expect to be perfect.
EVERY SECOND, ONE ACRE OF THE world's forest is destroyed. Each minute, 40 children die of starvation. In one year, over 50,000 people die from polluted air in the United States. In the next 25 years, one quarter of the world's species will most likely become extinct.

The degradation of our environment and the rapid loss of natural resources are serious problems fostering warfare, hunger and disease. The trends of over-population, resource depletion and mounting toxic wastes look like they will continue into the future.

So what are we doing about it?

At Cornell, students and professors are discussing these problems and planning for the future in a natural resources/government class titled Beyond the Year 2000: Practice and Policy as if the Future Mattered.

Just two years old, Beyond 2000 was the brainchild of William Gibson, a coordinator of the Eco-Justice Project. Gibson, an instructor for the course, was joined by co-teachers Professor Eldon Kenworthy of the Department of Government and Professor Richard Booth of the Department of City and Regional Planning.

The three professors think the course helps fill a gap in the Cornell curriculum. "I don't think the Cornell curriculum reflects the seriousness of the environmental crisis," said Gibson. He feels most people have a human-centered view of reality, which has resulted in foolish neglect and misuse of the rest of the earth.

The failure to deal realistically with the future seems widespread. Kenworthy thinks "most Americans have no view of the future. There seems to be an optimism that things will grow and prosper and we will all make more money than our parents." Booth agrees that most Americans are too concerned with short-term goals of tomorrow's personal health and security to think much about the globe's next 50 years.

"So many of the trends we're talking about happen 24 hours a day, 365 days a year, in small, almost imperceptible increments," Kenworthy said. But it is the constant effects of many interweaving factors that are adding up to possible chaos.

In Beyond 2000, students discuss present trends, the societal values that have created those trends and projections for the future. Last year, the course focused in depth on three topics: rain forest destruction and its relation to hunger, the energy crisis caused by depletion of fossil fuels and toxic waste.

The students discuss alternative ways to create "a preferred future." These include opportunities for individual changes in lifestyle, political action and artistic expression, as well as broader changes in value and governmental systems.

Kenworthy, Gibson and Booth all believe a better future is possible. They are neither optimists nor pessimists. Instead, they are conditionalists who believe the problems of the next 50 years will be substantial and challenging, but not insurmountable.

"Some things are certain," Kenworthy said. "It's certain we're going to
have at least 12 billion people and fewer resources and problems of waste disposal. Those are the parameters. The variables are human imagination. We can make this into a nightmare or into something that works."

Booth sees one of two scenarios. "One is that we don't get on top of the environmental and social issues. In that case, I see a world that is increasingly violent as people struggle over what is left. On the other hand, I see a world in which we are able to grapple with the problems by learning to live within the earth's natural limits," he said.

"The problems created by too many people, wastes, and depleting resources are going to appear first in the Third World," Kenworthy said, noting that economic pressures are now leading many lesser developed nations to accept our unwanted toxic wastes and to sell off their resources. He said Third World nations are worth watching as the problems of the future manifest themselves.

But in the face of changing reality, what sort of solutions are necessary? Fundamentally, the professors see a need for new values and lifestyles. "We are at a turning point in history," Gibson said, "a turning point that is making the old ways of thinking obsolete and dangerous. People take it for granted that the U.S. has a right to a standard of living much higher than the rest of the world, that economic growth is necessarily good, that we're stuck in a system that can't be changed. There is a need for a very different world."

Gibson's revised notion of the good life includes three tenets. First is sustainability, or the ability of the culture to maintain itself over time. Next, equity, which will lessen the differences between the haves and have-nots. Finally comes a feeling of community, a sense of belonging in the ecosystem with shared responsibilities.

The three professors agree that changes might be necessary in world governments' structures and priorities. "What governments have to do is see that their role in maintaining health and security of citizens is tied to world survival," Booth said.

"Marxism and capitalism are both leading us down the wrong road," Booth added. "Democracies now are heavily motivated by material demands of citizens. But, states must learn that a better world doesn't mean increased consumption. It means education, health and happiness. Many of the ideas that motivate totalitarian states are also destructive of what it takes to allow the planet to survive."

Gibson said political and economic institutions are slow to face the failures of the old paradigms. While business has made some steps forward, market demands often do not seem to make it profitable to help poor people or preserve natural resources. Churches and universities have the responsibility to provide leadership in recognizing and acting on the dilemmas we face, he added.

Kenworthy sees nongovernmental organizations like Greenpeace playing an important role as people become more affected by deteriorating conditions and "wake up and take power."

Likewise, Booth thinks a return to the ideals of popular rule will be necessary.

In speculating on the factors that will lead to change, the professors of Beyond 2000 have considered the likelihood that dramatic crises will be the triggers for creating change. But what shape will these crises take? Booth wonders, noting that we have already been through disasters like World War II, Hiroshima, Chernobyl and Bhopal without gaining real consciousness of the scope of the problems. Kenworthy reminds us that we must not only experience crises, but we also must have people who will make the link between specific crises and the slow-moving trends caused by our wasteful lifestyles.

The professors hope Beyond 2000 students will be among the people to make that link. And no matter what form the future takes, Beyond 2000 will help familiarize students with complex issues. "We are graduating students into a future that depends not only on specialization, but also on ability to deal with the whole world," Booth said. "It's a future that requires us to see around corners."

"What I'd most like to see students take away from this course are information and empowerment," Kenworthy said. "Information, since these issues are not being raised in other courses. And empowerment, because when you hit students with this information, they often feel overwhelmed. I want to give them a sense they can move with it, from daily personal action up to choosing careers."

"I think the students need to be shocked a bit," Gibson added, "because the reality is shocking. The future can be good, but it's not going to be much like the past."

by H.J. MacKay '89
Fitting into the Puzzle

by Melissa L. Lanning '89

FRESHMAN STUDENTS ARE NOT THE only newcomers to hit campus this semester. About 213 students came from other colleges and universities this fall to finish their education at the College of Agriculture and Life Sciences. Beth Nielsen ’90 is one of those students. Nielsen, a transfer from SUNY Oswego, is a junior in communication.

"I was really scared and had a lot of mixed feelings," Nielsen told Anissa Buckley '89 and Amy Howansky '89 in a discussion of the differences between transferring or remaining at one school for the duration. "I didn't want to leave my friends behind at Oswego. I knew my way around there. I thought I'd be lost with 17,000 people at Cornell."

Buckley, a transfer from the Rochester Institute of Technology in the fall of 1987, said she transferred because she wanted the "Cornell name" to get accepted into a better law school. She is now a senior in agricultural economics, and no longer plans to attend law school.

Howansky, a fifth-year general studies senior, started at Cornell in 1984 and has never transferred.

Transfer students must adapt to a new college environment just as they did as freshman. The situation, however, is different. "I think it was harder," said Buckley. "The people your own age already have their circle of friends and they really don't want to accept anybody new."

Nielsen said starting at Cornell was easier than starting at Oswego as a freshman. She said she was naive, and knew nothing about college life as a freshman. As a transfer, she was more prepared to face Cornell.

Howansky adapted quickly to life at Cornell after arriving as a freshman in the fall of 1984. Coming from a large high school, she said she knew what to expect.

Buckley said she wishes she had come directly to Cornell, instead of transferring. "I have lost a lot of self-confidence. I'm a lot more insecure about getting involved in things here because I don't really know what is expected. I tend to hold back, whereas at RIT I went out and did everything."

She said two years would not be a long enough period of time to do the things she would like to at Cornell. Nielsen and Howansky agreed. "That's one reason why I changed my major," Howansky said. "I want to cram it all in this last year."

Transfer students often worry about fitting in, and are concerned about student attitudes toward them. Buckley admitted she would hesitate before telling someone she was a transfer student.

Nielsen discovered that people reacted positively. "They treat you with respect, almost like you're older than they are." After listening to Nielsen, Buckley agreed that the reaction was more positive. "There is a lot of interest, and they want to know more about you."

Howansky said she had no positive or negative attitudes about transfer students. "You don't have a 'T' branded on your chest. I guess at first I would wonder why you transferred, but after that I would forget you are a transfer. I always wondered how it would be to go to a place for two years and then just leave all your friends," she added. "I have always felt that it would take a lot of guts."

One factor Howansky noticed was how transfers stick together. "I guess that is just like coming in as a freshman. You come in with them, and then you hang out with them," she said. Buckley and Nielsen agreed with her. "All of my friends are transfer students," said Nielsen, while Buckley nodded her head.

When Nielsen asked for advice on how to adapt to Cornell as a transfer, Buckley responded, "No matter how intimidated you are, go out and get involved in things. I wish I had. I wish that I had gone out and met more people and participated in more activities. If you make the effort, people will come around."

She continued by saying that she would be sure her children get into the college of their choice and will remain in so they won't have to deal with transferring. "It cuts into your college life. Since I've been here I don't feel like a student. On the other hand, I think I'm ready to go out in the real world because I was a transfer. If I had remained at RIT I might not be."
Trading Opinions

AMERICANS WHO HAVE WATCHED the 1988 presidential election closely over the past months are well aware that a potential for change is great this election year. Foreign students in the College of Agriculture and Life Sciences are interested in the election, regardless of where they are from. These students hold concerns about relations between their country and the U.S., and hope the election will have a positive impact on their nation.

Jose Vicente '91 of Bolivia points out that his country is working to improve its international image, especially in the United States. "They (Bolivian police) captured Roberto Suarez, one of the biggest drug traders in Bolivia. This is an example of the kind of efforts going into improving our image abroad," Vicente said.

Despite their government’s eagerness toward warming relations with the U.S., Vicente, with his roommates and fellow Bolivians, Brendan Kenny Paz Campero '89 and Ricardo Delozada '89 have some criticism for Washington’s policies toward Bolivia.

All three admit that the ailing Bolivian economy would benefit from U.S. aid. Bolivia is still feeling the crunch of a devastating recession in 1984, which sent the value of the American dollar from 25 to 2 million pesos.

The drug crisis in the United States has made Washington uneasy about providing significant aid to one of the world’s largest cocaine-producing nations. "Bolivia cannot afford to fight the drug trade alone," Delozada stressed, "there is great praise from the U.S. for our fight against drug traders, but no money."

Kenny Paz Campero hopes to see some improvement with a change in the White House. "We’re looking for more consistency in the U.S. government. Don’t speak one way, and act another. If the U.S. wants us to fight the drug trade, they must show us with real support." The three do not have a favorite candidate, but they did offer a clue. "The record and reputation of the Republicans is not good in Bolivia," Vicente said.

While the U.S. is fighting to stop the drug trade, it is pursuing a free trade agreement with its northern neighbor, Canada. According to Toni Pinkerton ’90 of Alberta, public opinion in Canada is split evenly over the free trade issue. "A lot of Canadians think it will be bad for Canada because most Canadian companies won’t be ready for U.S. competition."

Wayne LaPier ’89 of Ontario disagrees. The trade agreement will force Canadian companies to become more competitive and open up whole new markets for some Canadian products, he said. President Reagan and Prime Minister Brian Mulroney discussed the agreement at the World Economic Summit in Toronto last August, but no formal agreement has been established. Neither Pinkerton or LaPier preferred either candidate in the 1988 election. However, Pinkerton did produce a scientific evaluation of the Republican candidate. "I think Bush is a goof!" she said.

Chika Akera’s country has been accused by the U.S. government of unfair trade practices. Akera ’92, of Tokyo, Japan, feels the criticism is unfair. "The Japanese people work very hard and have earned the position they are in. If American companies want to compete with Japanese products, they must do a better job, not attack the Japanese," Akera said.

Not all of her countrymen agree. "Japan definitely imports fewer American products than the Americans do Japanese products," said Scott Dolph ’92 of Yokohama. "It isn’t fair to the U.S."

Dolph is convinced that the dispute over trade practices can be solved through a better understanding between the American and Japanese cultures. Japanese people understand very little about American culture, he said. From the way Dolph has seen Japanese...

For U.S.-Japanese relations to improve, there must be a man in the White House who has foreign experience.

—Scott Dolph ’92

by Tom Hostage ’89
ON FEBRUARY 14, 1987, THE CORNELL chapter of Phi Gamma Delta (FIJI) held a Valentine's Day semiformal. It was probably a very romantic evening, complete with hearts and flowers and all the things associated with Valentine's Day—romantic, that is, until after most of the guests left. Following the dance, two of the fraternity members' actions sparked a raging controversy on campus and prompted University officials to revoke FIJI's charter as well. The men allegedly committed rape.

Although the turmoil died down within the following year, another fraternity member's actions re-kindled the fire in September. An invitation to a party at Phi Kappa Tau, circulated around campus, depicting the party's theme of "Nuts and Bolts" in a sexually explicit cartoon. An uproar followed, fueled by a poster that read "Do Fraternities Encourage Rape?" and "Does Cornell Care?"

Cornell's fraternity system has a long history—it is as old as Cornell itself. "Seven [fraternities] established themselves in Cornell's first year," wrote Morris Bishop in his book The History of Cornell. From there, the system boomed. Fraternities became so popular that when Professor O.D. Von Engeln '08 wrote his book Concerning Cornell in 1924, he said, "About one-third of the five thousand regular students in the university are fraternity men." And the fraternities remained popular, even during radical times like the 1960s.

"I went to Cornell in the mid-sixties," said Bob Roe, a lecturer in the Department of Communication. "For traditionally valued people, fraternities were a big thing, but there was also a less-conforming element in the '60s, so there was a lot of social life outside of the Greek system as well."

Today, 50 fraternities exist on campus, and 38 percent of the eligible men belong to them. Last year, 720 Cornell men pledged fraternities. Obviously, the fraternity system thrives as one of Cornell's oldest traditions.

Considering the popularity of the Greek system, how could such a controversy exist on campus? Are the allegations true, or do these opinions represent just a minority of the people? Perhaps a closer look at the cases can further understanding.

The two men accused of rape were later exonerated by Ithaca's Grand Jury. After the exoneration, other women came forward and claimed that they too had experienced similar instances at the same fraternity. University officials led a month-long investigation into the situation, and found, as reported by The Cornell Daily Sun, that there was a sexual problem at the house.

After much deliberation, David Drinkwater, dean of students at that time, decided to disband FIJI until 1991. Needless to say, members were quite distraught.

"The University gave up on us," said Todd Ackerman '89, who was a pledge at FIJI. "Drinkwater knew [the house] didn't have a problem, but he also got a lot of pressure from parents."

Recently, the 10 remaining members of the house applied for a reinstatement.

"If they waited until 1991," Ackerman said, "there would be no one left. All of the members will have graduated by that time." Despite their request, the University declined, because, as reported by the Sun, the students did not meet the proper criteria which Drinkwater had insisted upon for recognition at this time.

Campus reaction to the situation is
widely mixed. Many feel that the University was a bit hasty in their original decision.

"There were a lot of accusations flying around," said communication student Elizabeth Hujsak '90. "Nothing was really proven, and the punishment was much too drastic for something that wasn't a fact."

Patricia Rapiszewski '90, a College of Agriculture and Life Sciences student, agrees, but she does not feel FIJI should be reinstated until 1991. "If the University allows them back on campus, then it really is not dedicated to its position. Wishy-washiness is bad."

Of course, there are differing opinions around campus. "If evidence showed that there was sexual abuse, then the fraternity should have been disbanded," said Jay Zweibaum '90.

The incident happened nearly two years ago, and public opinion tends to soften with time. The latest development in the sexual controversy is the sexually explicit cartoon which appeared on an invitation to an on-campus fraternity party this fall.

"It was not meant to be offensive," said Phi Kappa Tau president Steve Gray '89. "It was meant to be fun."

In conjunction with the theme of "Nuts and Bolts," he explained, every woman receives a nut and every man receives a bolt when they arrive at the party. During the course of the evening, the guests must match the nuts with the bolts. "People avoid stupid, corny one liners like 'Haven't I seen you before?' with this kind of a theme. It's a great way to meet people," said Gray.

After the invitations were issued, however, a student group circulated a poster asking "Do Fraternities Encourage Rape?" linking the alleged rapes with the explicit invitation. Another group circulated a petition, requesting that the brothers who published the invitation undergo sexual counseling.

"Everybody agreed that it was in bad taste," said Roe. "It was meant to be cute, but it wasn't well thought out."

"I was amused," said Rapiszewski, "but that's not to say it wasn't offensive to others."

Ackerman, however, stated that he found nothing wrong with the invitation. "We're in college here. It's all in good fun.

Although the University suggested that the fraternity cancel the party, the brothers refused. "To cancel the party would have been an admission of guilt," explained Gray.

In order to assure the safety of their women guests, the fraternity offered an escort service from the party. However, Gray said that nobody asked for an escort. "The escort service was a really nice gesture," claimed Hujsak. "It showed that the fraternity really cared."

Gray also issued a formal apology "to anyone who found the cartoon offensive."

Concerning the people who published the poster, Gray stated in his apology, "As much as we have been damaged by their actions, we support them fully in their future endeavors to work against sexual abuse."

But was the apology just a "PR stunt," as one student said recently? Some people feel that even if the invitation was not intended to encourage rape, the underlying principles are still present in the cartoon.

"Perhaps it's worse if the intent wasn't present," said Zweibaum. "If it wasn't present, then those values may be ingrained into our society."

"If there is a problem," said Roe, "then it's a long term problem. There are no short cures, and it will probably take at least a generation to change it."

Although this controversy has arisen within the past few years, many people feel it is not a new problem. If this situation is really the case, then perhaps the controversy is one step towards eliminating the abuse. Community awareness is increased as people discuss the problem. This new awareness might provoke a change. Roe said if there is a problem it will take a long time to change it. But public awareness is the key to solving it.
Revolutionary Change

THE DIVISION OF BIOLOGICAL Sciences has recently reorganized the biology curriculum. Biology majors must now take a four-credit course in evolution to fulfill a "track," formerly known as a concentration in biology. All tracks have nearly equal numbers of credits under the new system, a change students and faculty both say was long overdue.

"Sometimes a student would choose a particular concentration based upon the credit requirements and not the subject material," said Harry T. Stinson, associate director of the Division of Biological Sciences.

Each track in biology now requires 13 to 15 credits for a student to receive a degree in biology. In the past, biology requirements allowed a range of 9 to 20 credits in any one concentration.

A course in evolution has replaced the breadth requirement, the required selection of two courses from a prepared list.

The biology curriculum committee—composed of students, members of the faculty and administrators of the Division of Biological Sciences—proposed in the fall of 1987 the changes to biological sciences faculty, who after discussion, voted for the change.

James Pyskaty '89 and member of the curriculum committee said "Students were shying away from physiology and biochemistry, because of credits, and taking genetics" and other concentrations with fewer credit requirements.

Pyskaty said change was needed in the curriculum to increase flexibility for the students to take courses other than those specified by distribution requirements and requirements within the biology major.

Removal of the breadth requirement gives the student more freedom, Pyskaty said. "By eliminating the breadth requirement, this gives the student the opportunity to decide on what his conception of breadth is," Pyskaty said.

In the past, a biology student would get so wrapped-up in his track, that he would either consciously or unconsciously avoid many other courses. The student would not be exposed to other important areas in biology and the humanities, Pyskaty said.

Perhaps the most radical change in the curriculum is the new evolution course requirement.

Richard Harrison, professor for the course in evolution, said he is "very enthusiastic" about the change. "Intellectually, it makes sense. Evolution is clearly at the base of the biological pyramid."

All areas of biology relate to each other in terms of evolution. The workings of genetics manifest in natural selection, and these genetic changes cannot be separated from biochemistry and other processes, Pyskaty said.

"When biology courses are kept separate, it's hard sometimes to see how they relate on a broad scale. Studying evolution brings them together," said Pyskaty.

William Provine, professor of ecology and systematics, said implementing the new biology requirement was "the most fundamental step" to take in the curriculum. "Most other major schools have an evolution requirement and if they don't, they should have." All of the biological sciences "make sense in light of evolution," he added.

With the addition of a required course in evolution, one might wonder how the creationist students (those believing God created the Earth) feel about being forced to learn a theory contrary to their beliefs.

Provine said one would be hard put to find a creationist biology major, but said he encounters creationist non-majors in his Biological Sciences 207, History 287 evolution course. "Last year, I had six or seven creationist stu-

by Jeff Kazmierczak '90

Biology students practice the art of scientific experimentation in a Stimson Hall laboratory.
Learning with Animals

by Lauren Parker '89

ONLY A SMALL PERCENTAGE OF Cornell graduates can boast that they learned how to milk a cow in college, or how to shear sheep, or how to grade eggs. Such "hands-on" experience is what makes Cornell's animal science courses so interesting, educational, and above all, lots of fun.

"Everyone should take at least one animal science course no matter what their major is," recommended Robyn Tice '88. "They're really fun and you'd find them surprisingly interesting." Although Tice was an animal science major herself, she did coerce her friend, a psychology major in the College of Arts and Sciences, to take one too. "I talked her into taking Horses and she absolutely loved it."

While not all students taking animal science courses are majoring in that field, almost 100 percent of the students are in the College of Agriculture and Life Sciences, said Dr. David M. Galton, a professor in the dairy cattle concentration.

Students learn the widest variety of farm techniques in the introductory course Domestic Animal Biology I. This course provides an overview of most domestic farm animals—covering breeding, reproductive cycles, nutrition, grooming, feeding and more. Students study all sizes of livestock from chickens to cows.

Unless students are from farms, few have had prior experience with large farm animals. For the unprepared, the first lab experience, held in the Livestock Pavilion or "Petting Zoo", can be quite a shock. "I showed up on the first day in a skirt and brand new shoes," laughed Tice, "How was I supposed to know we'd be running around with the pigs?"

Dairy Cattle Production has additional barn duties to further supplement the labs. Students are assigned to 6am or 6pm "chore times" at the Teaching Barn located behind Morrison Hall. There they are responsible for feeding, milking and caring for all eight to ten cows and also for keeping the barn clean.

Students learn modern milking techniques in weekly lab sections and even learn how to taste the milk for quality and flavor. Field trips to dairy farms in a nearby area expose the students to different management systems.

Many students plan to continue on to veterinary school and learn many medical techniques in dairy cattle courses as well. Students learn different practices that a veterinarian might perform on the cow at a check-up including how to give injections and draw blood.

Galton is pleased with the overall positive reactions he receives for his course Dairy Cattle Production. "I get very excited when a disinterested student who must take this class for his major ends up really being interested in dairy cattle. That's success in teaching."

One student said, "I'm a non-farm student right from the heart of the city and I felt the course was excellent." Another student, a biology major with a concentration in genetics, praised this as the best course he ever took.

Galton attributed this enthusiasm to the lab exercises and the hands-on experience. "Labs are very informal and fun. Students like this different approach and welcome the change," he said.

Horses is another course that attrib-
EVER WONDER WHAT IT FEELS LIKE to be one among the masses? At a university as large as Cornell, it can be easy for students to feel this way, but for the 69 Native American Indian students who attend the University, this scenario strikes a particularly familiar slice of reality.

In 1981, the American Indian Program (AIP), an intercollegiate multidisciplinary program based in the New York State College of Agriculture and Life Sciences, was established in part to offer support to all Native American students attending Cornell. The American Indian Program's Associate Director, Ronald LaFrance explained that coming to Cornell is somewhat of a "culture shock and socialization shock" for some Native American students who come from rural, close-knit communities where everyone knows each other and where most everyone is Native American.

“In one sense, Indian students do not experience differently than rural students,” said LaFrance, “but in terms of community, they are leaving a very social, political and spiritual nest.”

One such student, Steve Fadden ’88 MPS ’90, describes the Program as “a port in a storm.” Although Fadden was a fairly atypical freshman when he entered Cornell five years ago at the age of 30, his experience as a Native American on campus was not. Fadden said it was harder for him to find “comradeship” partly because of his age, and partly because he was from a different ethnic group. Like many other Native American students, however, Fadden was able to draw support from the AIP.

“I darn near lived there,” admitted Fadden, adding that most of the support came from just being around other Native American students.

Soon, however, Native American students will be getting an additional port in the storm in the form of a residential Indian Program House. The House is scheduled to open in the fall of 1990, but according to LaFrance, there is a chance that it could open before that date. The building in which the House is to be located is the Department of Communication Graduate Center's current home. The communication department will be moving to Academic One, the ag college's newest building, as soon as construction is completed.

As of this writing, construction of Academic One is ahead of schedule, and if that continues, the Native American Program House could also open before its scheduled time.

Whatever date the House opens will not be soon enough for the approximately 35 men and women who will live there. All Native American freshmen will be guaranteed housing if they want it. This is because the first semester is so crucial to all freshmen, especially Native Americans who number so few among their class, much less among the total Cornell population. “You're lonesome, you don't know anybody,” said LaFrance explaining the problems faced by some Native American freshmen. For that “initial uncertainty,” Fadden agreed that it is very important for students to live in an "environment that closely approximates home.”

Creation of such a natural home-like living environment that students can call their own and feel comfortable in, may well be one of the most important elements of the proposed House. This type of atmosphere fosters a sense of security and identity within students and allows for free open "unstructured and unplanned discussions of Indian life and culture.”

"Older students can be peer counselors for other students, and students can establish lifetime friendships and an Indian network," said AIP Director and music professor Dr. Charlotte Heth.

The building itself will have to undergo some renovations before residents move in. Physically, however, the House will contain three very important features apart from the student living space that will accommodate its objectives.

Two guest rooms will accommodate occasional visits by the families of Native American students, some guest lecturers sponsored by the House and other Indian people visiting Cornell on AIP business. Heth considers this to be a particularly important feature especially in terms of family visits.

"A lot of times, we lose the generation ties that are needed," said Heth. Therefore, having "a place where parents can come and stay with their children" provides a great opportunity for students to keep in touch with their
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homelife as well as maintain those ties between generations.
There will be a library and resource center within the House which will carry displays of Indian arts and crafts. The third vital element will be a meeting and seminar room for hosting various activities sponsored by the AIP or the House members. This room will also hold displays of Indian art.

According to LaFrance, the programming possibilities for the House are as vast as the Native American culture. Program ideas run the gamut from "social functions" to "film festivals" to "poetry readings" to "theatre events" to "speakers on heavy political topics," said LaFrance. And although the AIP staff will play an active role in the House's programming activities, LaFrance said the students themselves will have a major part in deciding what goes on there.

Although this will be a Native American Indian House, this does not mean that it will be a place just for Native Americans. The House will be open to both Indian and non-Indian students alike who are interested in the culture and want to live there. Similarly, non-residents will not be excluded from any of the House's programs and activities. As such, the program promises to "foster intercultural learning and an exchange between Indian and non-Indian students."

Yet still, there are those who may insist on branding the House as "segregationist," despite its apparent inclusive nature. Ujamaa Residential College, a similar such program house for students of color at Cornell, as well as whites, has borne this label in their attempts to establish similar objectives.

"I don't buy the segregation argument," said Fadden. "I just don't buy it. Segregation is something that is forced on people and the House is clearly not being forced on anyone."

LaFrance argues that those who make this claim are missing the point as to why the House is being established in the first place. "We don't want to be isolationist," stated LaFrance. "Isolationism enforces ignorance and ignorance enforces stereotypes." One of the functions the House hopes to serve in addition to its supportive role will be to break traditional Indian stereotypes through education and interaction.

Both Heth and LaFrance point to one other major advantage that the House will provide. "I see it as a good recruiting tool," stated LaFrance. The House in providing a "receptive environment" for all Native Americans will make Cornell more inviting to potential Indian students. LaFrance also points out that it will help to alleviate the apprehensions of some Native American parents who worry "what's going to happen to my kid" when I send him or her off to Cornell where he or she is only one of "69 out of 18,000" students.

The recruitment factor becomes even more important in light of the fact that the number of Native American students at Cornell is on the rise. This is due mostly to the already commendatory efforts of the AIP and the House can only improve on that record. Just 16 years ago, there were only about two Native American students at Cornell, said LaFrance. Now there are 69. But even more telling is the dramatic increase in just one year. "Since last year, there has been a one-third increase," stated Heth.

Ultimately, the Native American Program House can only serve to complement and add to the important work already being done by the AIP, which in addition to its student support role, also functions as an academic component and a research and extension organization. Academically, the AIP offers 15 intercollegiate multidisciplinary courses to all Cornellians, and most of the extension and research activities it undertakes are for the benefit of all Native Americans in New York state.

The AIP already provides immeasurable services to the Cornell community at large. The Native American Program House will only enhance this service, provided that Indian and non-Indians alike choose to participate in these programs. Meanwhile, however, many Native American students can feel more at home in the masses at Cornell.
A Garden for People

Many campus travellers enjoy the Lua A. Minns Garden on the way to the ag quad.

NOT EVERYONE GOES BACK TO work to relax and unwind after leaving for the day. But gardeners do, and they even bring their families with them, according to Siri Awtar Singh Khalsa '70.

Khalsa has worked at Cornell as a gardener for 15 years, and he still brings his family to the Miss Lua A. Minns garden once in a while just to relax.

"When I walk out here in the morning, the smell, the crispness, the color, just the whole feeling of it is beautiful, especially in the fall," said Khalsa. "If I didn't love it, I wouldn't be in the business."

"Students and faculty come up to me and say it's a break for them," Khalsa said. "The nursery school likes to come, too. They all ask a lot of questions, they come back and say they learned something."

"People come here from all over," said Khalsa. "People from opposite climates come and ask about the flowers that grow in this climate. It's another aspect of the job."

"Once somebody came from China and wanted to know if he could take some of the plants home with him," he added.

The Department of Floriculture and Ornamental Horticulture, whom Khalsa works for, has had the care of the Minns garden since 1915, when Lua A. Minns'14 decided the campus needed a garden, according to Professor Robert G. Mower '56, floriculture department, and supervisor of the Minns garden.

The Miss Lua A. Minns garden was originally planted in a field where Malott Hall stands. Minns, the first instructor of herbaceous plants, created and cared for the garden for twenty years with the help of her students.

When Minns died, the garden became a memorial in her name. The garden was moved to Tower Road in 1960, according to Mower.

The garden is a display and a teaching tool, said Mower. He uses the garden as an outdoor laboratory to teach students a variety of gardening practices. In the fall, the classes help prepare and plant the tulip beds.

The students in Mower's floriculture classes also help with the upkeep of the gardens. "The gardens are there because of their effort and contribution over the years," said Mower. Khalsa does most of the work throughout the year, though, he added.

"Siri has a lot of freedom," said Mower. "He essentially does everything."

Khalsa is responsible for the designing of the annual flower beds, which are changed every year. Each winter, Khalsa looks through the new seed and bulb catalogues to see what's new, and he completely replans the annuals and the tulips, Khalsa said. The perennials in the border, including iris, peony, delphinium, phlox, daylily, aster, and chrysanthemum, remain essentially the same.

With growing seeds, and redesigning, the job of gardener is year round. The most active season is "as soon as you can get out in the spring and lasts until the snow flies in this area," Mower said.

In the summer, the department hires students to help with the many tasks of gardening in the Minns, said Mower. Sometimes the students get enthusiastic and work hard all summer to gain practical experience. The students really enjoy the work, said Khalsa, and they get interested in all the aspects of what he does.

"We usually have two students working for us; they give us a boost," said Khalsa. "If the students weren't here, we wouldn't have as nice a garden." In the fall, the classes help prepare the gardens for the winter months, said Mower. Taking care of the Minns garden is intensive, Khalsa said.

Khalsa likes the early morning when everything is fresh, and the evening when the colors come out. He also enjoys talking to the people who visit, including the same guy every year who wants Khalsa to save all the red peppers for him.

by Brenda Davis '89
Birdwatchers On Vacation

"GLIDING SILENTLY IN A CANOE ON a jungle stream at Angels Falls while a pair of scarlet macaws fly noisily overhead or strolling the golden headed quetzal in the forests of the Andes..."

Surprisingly, the above is not an excerpt from a Jules Verne novel. Rather, it is a brochure's description of what an ordinary person would see if he were to travel into the depths of Venezuela with McHugh Ornithology Tours (MOT).

G. Michael McHugh '50, coordinates exotic bird watching excursions, technically called ornithology tours, from his office and home in Ithaca. For the past six years, he has been running tours to different countries around the world. Ranging from Alaska to Argentina and Hawaii to Scotland, his tours have been attracting avid bird enthusiasts. It seems that McHugh has hatched onto a growing trend in the travel industry.

The growth of bird watching stems back to Roger Tory Peterson, an artist/ornithologist, who developed the first comprehensive field guide of birds, according to McHugh. Given the accessibility of such a book, people started to find serious interest in bird watching.

People who catch the "bird gazing fever" tend to travel through stages of symptoms before they become "experts." McHugh sees this as a gradual process, from recognition of birds by sight to recognition by sound. At this stage the person becomes most interested in tours, he said.

But would people travel to obscure, undeveloped areas of this world to merely bird watch? Not entirely. Although it is the focus of the trip, McHugh believes that "birding" is not the sole attraction.

People go on ornithology tours for several reasons. Americans have the money and the desire to choose bird tours as a vacation, McHugh said. People become "bored stiff with the luxury cruises where all they do is eat and play shuffleboard all day," he added.

A solid market exists for people eager for an active vacation. "Bird tours" tend to be more expensive ($125-$200 per day inclusive) than the "packaged" tours offered by various major credit card companies. This is due to the relatively small groups McHugh coordinates. With only 10 to 18 people per trip, the tour guides can provide personal attention to each individual.

McHugh runs a very select and carefully organized business. "I try to do everything first class for my customers." And it shows. Ninety percent of the people who travel with MOT are repeat customers. The "regulars" tend to be older couples close to retirement, but younger professionals also seem to enjoy the tours.

McHugh was initially exposed to the ornithology tour business as the Director of Cornell Alumni University where he started their study tour program for interested alumni. He later became an active board member of the Laboratory of Ornithology at Cornell, an administrative unit of the University.

Since leaving the board, he has owned an independent business coordinating Lab sponsored tours. In 1989, MOT is scheduled to operate five ornithology tours for the Lab.

Since trends have the tendency to fade sometimes as quickly as they appear, one question remains pertinent to the destiny of MOT. Is there any future for ornithology tours? Based on population dynamics, McHugh anticipates a steady increase in "birding" tours at least through the year 2000.

The demographics of our society are such that senior citizens are the biggest percentage of the travel market. "For the next ten years, the biggest segment of the population will be the older folks," speculates McHugh, implying that his business can only be subject to growth.

As for the immediate future, McHugh expects his business to plateau at a steady 24 to 30 tours annually. Expansion for MOT will involve the addition of new countries to visit more ornithological wonders. Six tours are scheduled for Australia in 1989 and plans are in consideration for expeditions to Russia by 1990.

It seems that McHugh, through past affiliations with Cornell and the Ornithology Lab at Cornell, stumbled into the ornithology tour business. In quoting a speech he remembers hearing, McHugh confides, "A lot of people work all their lives doing something they do not enjoy." As far as being a "birding" entrepreneur is concerned, McHugh enjoys his work, and jokes "it beats working for a living."

by David Oliver Holcomb '89
AT AN OPEN-AIR ARABIAN MARKET, hundreds of merchants peddle sheep, pomegranates, and beaded necklaces to throngs of villagers and travellers. On a bustling London street, girls sell flowers to couples walking arm-in-arm, peering in the windows of the shops along the promenade. On a busy New York streetcorner, an aspiring musician plays his harmonica and pushes sunglasses and wallets to passers-by. On the crowded steps of Cornell’s Willard Straight Hall, off-campus vendors and students sell anything from Grecian sweaters and Peruvian jewelry to magazine subscriptions and lollipops.

The front steps of Willard Straight Hall, “The Straight,” have long been a place where students informally gather to share the tales of a weekend roadtrip, to wager a guess about which team will win the upcoming football game, or to, as Cornellians say, “put in a little facetime.” Hundreds of students, staff, and faculty enter and exit the University’s main student union using the main steps on the east side of the building, facing the Cornell Campus Store and Sage and Barnes halls. During lunch, the steps buzz with activity.

Talking, chattering, and laughing are not the only noises adding to the excitement of a day on the steps; buying and selling also contribute to the seeming frenzy of darting between vendors and other people as one tries to enter the building. Each day, four or five off-campus vendors, student organizations, or University departments set up shop and sell whatever they have to offer to anyone stopping to take a look at their merchandise.

Lori A. Wallace, president and founder of The Corinthian Trading Company, sells sweaters, Grecian sweaters. In early September, her table on the steps of the Straight was stacked with red, blue, turquoise, green, and black hand-knit sweaters. For three years, and since she graduated with a B.S. in International Business and Finance from Ohio State University in 1988, she has bought sweaters made in Greece and sold them to college students in the United States.

“IT all started when I went to Greece during my second year of college,” she said, “When I brought gifts back for my family and friends, they really liked what I had gotten them and wanted to know where they could buy such nice sweaters and jewelry.” That was enough to convince Wallace she had to go back to Greece and buy more sweaters. She founded The Corinthian Trading Company and began selling sweaters on college campuses in 1986. “I usually travel to thirty schools a year and sell whatever I’ve brought back,” she said. Wallace has been to Greece three times this year.

“Students really like the sweaters because they are a high quality investment,” she said. Wallace explained that the sweaters she buys and imports are hand-knit in Greece from wool.
processed and dyed in Australia. "The sweaters I sell don't have burrs or bits of twig in them. The wool in these is better than the wool of some sweaters sold in department stores. My sweaters are only $55," Wallace said.

Wallace travels to Greece to select designs, colors, and quantities with the people from whom she buys the sweaters. "I've developed a great relationship with the people over there. It's just a cottage industry, but the quality is great," she said.

"I like selling to students and they like what I have to offer," she said. Wallace mentioned that she also sells jewelry, but that 90 percent of her business is selling sweaters. "I also like to sell on campuses because I get to see what other businesses are selling." Next to her table, a man was selling Peruvian jewelry. "You really get a flavor for many different products and what you yourself could sell," she added.

Without going around the world like Wallace, Geoffrey R. Goldberg, a communication senior, started a new business at the beginning of the semester.

Face to Face Marketing Inc., headed at Cornell by Goldberg, capitalizes on the high traffic on the steps to sell magazine subscriptions and credit card offers to students. "We were on the Straight steps for six days and did amazingly well," Goldberg commented.

The student organization is a branch of the national company, Face to Face Marketing Inc., founded by the president of Time-Life's Dorm magazine in 1987. In addition to the branch at Cornell, a similar organization is operating at Rutgers University in New Jersey.

"We offer discounted magazine subscriptions and memberships to compact disc and record clubs for a fraction of what other services can provide," commented Goldberg. "Selling at the Straight really put us in touch with a tremendous number of students in such a short amount of time. We were pleased with our results," he said.

To set up shop on the steps requires planning and paper work. Martha Miceli, reservations assistant for unions and activities, said, "Sometimes people call months in advance to reserve a spot on the steps. Others call a few weeks before they want to sell on campus. We are generally booked solid two weeks in advance." Off-campus vendors and student organizations must submit formal proposals to the office of unions and activities about what they plan to sell before a reservation can be made.

"We usually get a lot of vendors wanting to sell jewelry and sweaters. Student organizations vary, some sell products or food, others raise money for charity," Miceli added.

"Last spring," said Anne Whitmore, '89, "I was walking into the Straight and someone tried to sell me a lollipop. They showed me three or four different lollipops and asked me to buy one because the money was for charity. I bought one." The next day, commented Whitmore, "Someone asked me if I wanted to buy a ticket to a concert at Bailey Hall. I didn't really know what to expect the next day."

Each night, in the crisp days of autumn or the early weeks of spring, the vendors pack up, count their take, and get ready to open the next morning.
Hockey With Finesse

Megan Shull, #19, skates with finesse in a contest with St. Lawrence last season.

THERE WERE ONLY SECONDS LEFT in the game and Harvard was ahead by one goal. But the women of Cornell Ice Hockey were not about to let their opponents walk away with an easy victory. Cornell's Mindy Bixby raced toward Harvard's goal and tied the score with a perfect shot. The game went into overtime and lasted for a few more intense minutes. Unfortunately Harvard scored first and won the game, but it was still very exciting.

Excitement is what Cornell Ice Hockey is all about. The Women's team has experienced this kind of action since it was first established as a varsity sport at Cornell in 1970. The program has experienced tremendous growth since those early years. It is now a serious and highly competitive sport, mainly because of the higher caliber of women coming out to play.

Women's Ice Hockey follows slightly different rules than Men's Ice Hockey. Checking is not permitted in the women's games. This rule creates an interesting style of hockey because the women are forced to become very adept at their passing and skating techniques.

Coach David Harackiewicz explained that this added dimension was one of the reasons he chose to coach the women. "I was interested in a challenge and I wanted to become involved in a teaching experience," he said. According to Harackiewicz, coaching a women's ice hockey team involves more work on perfecting the fundamental skills because of the different rules.

A majority of the players come from the northeastern area of the United States and Canada. All of the women played competitive ice hockey on either a prep school team or a traveling team, prior to their college years.

Traveling teams and prep school teams serve as important sources for recruits. Harackiewicz explained the importance of Cornell's recruiting process. "There are six varsity ice hockey programs for women in the Ivy League and 15 varsity programs in the northeastern area. These schools are all vying for the same group of players," he said. "The women who choose to play ice hockey at a certain school do so because they like the school and they truly love the sport. There is no goal to eventually play professional hockey, as there might be in a male hockey player's mind."

The women must honestly enjoy the sport because they devote four to five months of their time to the season. Megan Shull, one of the centers for the team, said, "I must budget my time carefully. Practice consumes three or four hours every night, so I try to finish my work during the day."

Although the women devote a large percentage of their time to the sport, there are many benefits that they receive. Cornell's team has a strong sense of closeness. "We all become such good friends because we are together for so long," Shull said. Sarah Mixter, one of three team captains expressed her feelings. "The team consists of many diverse personalities, but we all enjoy ourselves throughout the season and we love playing together."

Another reason why the women enjoy playing on the team is the diversion that the activity offers. "There is a great deal of academic pressure at Cornell and when I play hockey I can put all my worries and frustrations aside," Shull said. Mixter added, "I don't let myself become depressed about a mistake anymore because I have the support of my teammates. Likewise, I enjoy being there for them."

The 1988-1989 season for the women looks promising. Enthusiastically, Harackiewicz explained he successfully recruited several top players. Mixter and Shull were also confident about the new season. They look forward to their next battle with Harvard, as well as the other games during the season. Women's Ice Hockey at Cornell should not be missed this year!

by Debra Corry '89
"I CALL IT AN INTERNSHIP BECAUSE I got little pay, but a lot of experience," said Sunny Edmunds '89, referring to her summer job with Photosynthesis, an Ithaca-based production company. Edmunds is one of approximately 45 communication juniors and seniors who participated in an internship program last summer. Although the College of Agriculture and Life Sciences does not have an arranged internship program for communication majors, it does offer Communication 496, a course which enables students to arrange their own internships for the summer and then receive credit for them in the fall. "We have students find their own internships as part of their learning experience. The interviews they go through will help them later in getting jobs," said Chris Whittle, the communication department's Internship Coordinator.

A computer list of 80 communication internships in the areas of public relations, advertising, publishing and broadcasting is available to students. If they are unable to find one that fulfills their needs in either a field of interest or an appropriate geographic location, they may apply directly to companies. Students receive one credit per 60 hours worked, with a maximum of three credits per internship.

"Ideally, each student will have had two internships by graduation," said Whittle. "This gives students the opportunity of trying out life in a particular field. If they are unhappy, it is better to know now, since they still have time to try another field."

Many students use the internships as an opportunity to try a new field when they are uncertain where their interests lie. "Until this summer, I had had jobs in every written media, so instead I decided to do something visual," said Edmunds, whose job entailed everything from pre-production to post-production of documentaries and educational films for National Geographic and Public Broadcast Television. "I'm still unsure whether I want to do this, but now my eyes have been opened to how it is all done," she added.

Summer internships can also produce permanent jobs. "A big benefit of having internships is that a large percentage of companies offer jobs to their interns when they graduate," Whittle said. "This saves students the agony of job searches during their senior year. I know students who did not send out one resume all year, because they knew they had jobs where they wanted to work," he added.

Students also cite summer internships as an important source for making future contacts. Rachel Hollander '89, plans to go into sports law. She worked for Sports Etcetera/Virginia Slims Championships doing sports event management and public relations. "This job enabled me to make contacts in the sports field that will help me in the future. The key to the success of my internship was that I knew it would interest me, and I was able to tie in the communication aspect of public relations. In sports law, one has to know what to do with public relations as well," she emphasized.

At the end of the internship, the student's supervisor completes an appraisal of the student. "This helps students learn their strengths and weaknesses," Whittle said. "I find it very encouraging that many students are now receiving outstanding appraisals. This indicates two things: We're teaching the right things to prepare students for work and the students themselves are highly motivated and hard working," he added.

Communication 496 has been experiencing a 25 percent increase in enrollment each year for the past three years. This is because students are finding it one of the most valuable "courses" in explaining how the real world works," Whittle said.

Gigi Bruno '89, who interned for the U.S. Cycling Federation in Colorado Springs agrees. "I plan to go into corporate planning. My job assisting the director of public relations and media this summer helped me focus more clearly on what I want to pursue as a possible career."
WHAT HAPPENS ON THE TOP FLOOR of Bradfield Hall? It serves as the home base for meteorology majors in the College of Agriculture and Life Sciences.

This year the Meteorology Unit of the Department of Agronomy is revamping undergraduate courses, and the Coordinator of the Meteorology Unit Dr. Warren Knapp said "a fairly radical change in curriculum" is taking place.

Knapp said a need to offer a greater scope in courses and to change the order in which some of the material is presented prompted the switch. He said an effort was made to close the gap in sophomore year when in the past no meteorology courses were offered to the majors.

The meteorology unit has devised a new curriculum which offers courses previously designated for seniors to sophomores. Knapp said this course change helps integrate the desire of most students to learn actual weather forecasting at an earlier point in the curriculum.

A senior meteorology major, Lidia Dubicki, said the change in the course curriculum is a good sign for underclassmen. She said the emphasis of the old system was too theoretical and less practical. She approves of the course realignment in the new curriculum and said, "Before the changeover, you were at a disadvantage because you wouldn't learn any forecasting until senior year."

Dubicki said, "Meteorology is not something everyone is into, and the major itself is not that well known."

Meteorology coordinator Knapp said there are approximately 40 majors this year ranging from freshmen to seniors.

Knapp said although Cornell's meteorology major is small, it is unique. He said, "Cornell is the only Ivy League school with an undergraduate discipline in meteorology."

Meteorology origins at Cornell are almost 80 years old. The reasons for its placement in the agronomy department do not have concrete explanations. Its designation, however, is attached to the New York state land grant history of the ag college.

The meteorology unit was at one time its own department. In 1934 the meteorology department disbanded and the Department of Pomology received the major. Finally, in 1950, meteorology was moved to the Department of Agronomy, where it remains today.

A professional meteorologist Kevin Williams '81 said having meteorology in the agronomy department of the ag college can be both a positive and a negative. He said, "Cornell is training some of the best meteorologists with backgrounds in agriculture that you'll find anywhere in the country."

He said, "On the other hand, you'll find that for a student who is interested..."
in meteorology for other reasons, such as theoretical research or broadcasting, the meteorology major can be obscured because it is in the agronomy department.”

Williams said that in most colleges the meteorology department is found in the engineering or arts and sciences curriculums. He said, “These are two of the more logical places for it to be.”

Cornell has a relatively small major compared to other institutions of the University’s caliber, he said. Some of these schools include the University of Michigan, Penn State, the University of Wisconsin and the State University of New York at Albany.

Williams points out, however, that size is not the only measure of quality. He said, “In terms of theoretical training and the ability to go on to get higher degrees, and in terms of the integration of meteorology and agriculture, Cornell is as top notch as they come.”

Knapp said about half of the graduating class goes on to graduate school to further their meteorology interests in research or teaching. He said roughly two to four graduating students a year will go into the military service in specialties relating to meteorology. He said the rest of the class usually enters the forecasting field for broadcasting or private firms.

Williams said there is “a cornucopia of things” available for career options as a professional meteorologist. He said in the private sector businesses, industry and media all find the need for tailored weather information. Private meteorologists can provide forecasting for television and radio, for ski resorts, for utilities companies, for travel agencies and for trucking companies.

Other sectors include working for the government in the National Weather Service. He said in the research division there is a need for meteorologists to study atmospheric chemistry, the ozone layer and the effects of lightning storms.

Meteorologists can also choose broadcasting options for careers. “A meteorologist is more than just the guy you hear on the radio or see on TV. He is just the most visible means to look at the field of meteorology and the atmospheric sciences,” Williams said.

He said the tide is turning in television weather broadcasting. No longer do most media outlets accept the trend of theatrics over the science. He said some people who have gone through TV weather include David Letterman and Suzanne Sommers.

“Many station managers now, both radio and TV, are looking for the degreed meteorologist who also has some ability to communicate or articulate local or national weather as it relates to their particular listeners or viewers,” Williams said.

One of the newest fields opening up is forensic meteorology, according to Williams. In forensic meteorology, a law firm or insurance firm will hire a meteorologist to determine what the weather conditions were at a particular place and time. This information is needed either for preparing a report or for becoming an expert witness to testify if weather conditions were conducive to a particular event that was claimed to have occurred.

Williams said one example is a barn blowing over, with the owner claiming faulty construction. He said, “On the other side, the insurance company says there were extreme winds. If it is proven that there were extreme winds, the insurance company is not held liable.”

The meteorology unit of the agronomy department has stretched and developed since 1909. The changes and fine tuning in its curriculum show a characteristic Ivy League desire for educational excellence.

Williams said, “A lot of people may not know that up there on the top of Bradfield Hall, that ugly, ugly building, is a group of students trying to do what some people consider the impossible—forecasting the weather.”
AGRICULTURAL TECHNOLOGY HAS advanced to the point where it is now possible to alter the genetic structure of plants and animals to produce the most desirable crop, livestock or organism for whatever human purpose necessary. Dr. Ralph W. F. Hardy, president of the Boyce Thompson Institute for Plant Research, said, "With genetic engineering we can synthesize proteins produced by nature, and create new genes nature has not yet evolved."

With so much power to harness and alter nature to suit man's needs, the question of who regulates and controls the production of such genetically engineered products becomes a valid one. Due to the complex nature of classifying genetically engineered material, the regulation currently comes under the control of at least five federal agencies, including the United States Department of Agriculture and the Environmental Protection Agency.

A Cornell scientist is concerned, however, that such thinly spread regulation may cause severe problems for effective control of genetically engineered material. Dr. David Pimentel, a professor of insect ecology and agricultural sciences in the College of Agriculture and Life Sciences, said the regulation of genetic engineering technology is too cumbersome. If the technology is mismanaged and results in a disaster, regaining public credibility for the industry would be difficult, if not impossible.

A genetic disaster might involve the release of an improperly tested genetically engineered organism (plant or animal) into the environment which would drastically affect the ecosystem of that environment. Pimentel said that 125 plant species and 40 animal species intentionally introduced in the United States have become pests.

"The record is not very good," he said. Of the 2,000 to 10,000 species of pests in the United States, pointed out Pimentel, only the citrus canker, small-pox and the Mediterranean fruit fly have been successfully controlled or exterminated.

Hardy is less skeptical about the risks of genetic engineering, as long as certain guidelines regarding the technology are followed. The Boyce Thompson Institute held a workshop in October, 1987, which involved representatives from public interest groups, the science community, government and industry. The workshop successfully produced a series of guidelines and suggestions that government regulators should follow when assessing the risks of genetically engineered material.

The report stated that weedy ancestors of major crops in the United States should be identified and remain separate from their genetically altered descendants. Hardy said that this report's suggestions would only hold true for this country, and that each agricultural region would require different stipulations depending on its environment.

Hardy said conjecture about possible biological disasters should not be the focus of regulation, and that emphasis should be placed on the benefits of genetic engineering as well as realistic analysis of the risks involved. "We don't like to play global 'what if' games," said Hardy, "because 'what if' games you can't really answer."

"We can synthesize proteins produced by nature, and create new genes nature has not yet evolved."

Pimentel maintained the idea that regulation should be consolidated under the control of the Environmental Protection Agency, so that liability is kept to one agency and management efficiency is maximized, and also because an agency that promotes as well as regulates products, like the Department of Agriculture, should not have regenerative powers.

Another workshop, hosted by Boyce Thompson, has been planned for the first quarter of 1989, with the focus on "feed and food" risks that could result from genetically engineered materials. Protein allergenicity is a factor that will be studied, said Hardy, to determine if such synthetic proteins—like many other natural proteins—could produce allergic reactions.

"I can't say what the outcome of the workshop will be right now," said Hardy. "That will depend on the experts at the workshop." He is confident, however, that such group efforts will yield positive results and help government regulators do their jobs effectively.

by Patrick O'Connor '90

A workshop focusing on "feed and food" risks associated with genetically engineered material will take place at the Boyce Thompson Institute in 1989.
Good Named Floriculture Chairman

George F. Good has been appointed to succeed Carl F. Gortzig '52 as chairman of the Department of Floriculture and Ornamental Horticulture through January 15, 1991.

Good, a Cornell faculty member since 1968, is a professor of ornamental horticulture specializing in woody ornamental plants and landscape horticulture. His research on the protection of container-grown nursery plants from winter injury has had a major impact on methods of growing nursery plants in the northeast.

Good was honored by the American Association of Nurserymen with the Norman J. Coleman Award in 1985, and received a Professor of Merit Award for excellence in teaching at the College of Agriculture and Life Sciences in 1980. A native of Cincinnati, Good earned a bachelor of science degree from Ohio State University in 1962 and a master's degree in 1966 and doctorate in 1969 from Cornell.

Oversight Committee for Boyce Thompson

An oversight committee has been established by the Board of Trustees of the Boyce Thompson Institute to guide the course of the institute's research programs. The committee will be chaired by Lawrence Bogorad, the Maria Moors Cabot Professor of Biology at Harvard University. Committee members will include professors from the University of Wisconsin, Stanford University, and Harvard University. Also on the committee are Wendell L. Roelofs, the Liberty Hyde Bailey Professor of Insect Biochemistry at Cornell's Agricultural Experiment Station at Geneva, and Norman R. Scott, Director of Research for the College of Agriculture and Life Sciences, and director of the Cornell Agricultural Experiment Station.

The committee will assess the soundness and quality of the institute's research programs and guide the direction of future research. The Boyce Thompson Institute, which moved to the Cornell campus in 1978, is internationally recognized as a leading independent research organization dedicated to the improvement of food and fiber production and maintenance of environmental standards.

Another recent addition to BTI is Stephen H. Howell, an internationally renowned molecular biologist who has joined the institute to direct its new program in molecular biology as the Boyce Schulze Downey Scientist. Howell, formerly a professor of biology at the University of California at San Diego, is the first person to hold the new position established in 1986 after contributions of $1 million from anonymous donors.

The new program in molecular biology will take on major sig-
by Deborah H. Lippert '89

WHEN YOU APPLIED TO CORNELL was this university your first choice, your second choice, or did it rank lower among the schools you hoped to attend?

This question was asked to 250 Cornell undergraduates last fall in a survey designed to study the Cornell "experience." It was the main project for students enrolled in a hands-on communication course, Survey Research Methods. Professor Paul Yarbrough and his 24 students designed and tested the 104-question survey as well as conducted 250 telephone interviews and analyzed the results.

According to The Insider's Guide to the Colleges, a popular college guide published annually by the Yale Daily News for high school students, Cornell is not the first choice for many of its students.

Every year the guide tells prospective students that "Cornellians have long suffered an inferiority complex about their status among other Ivy League schools, and indeed Cornell is the third or fourth choice for many of its students."

The results from the Cornell experience survey shed a very different light on the picture. Of those surveyed, an overwhelming 60 percent ranked Cornell as their first choice when applying to colleges. Twenty-eight percent ranked Cornell as their second choice, with only 12 percent ranking Cornell as their third or lower choice.

Rebecca King '89 said, "Of all the schools I applied to, Cornell was by far the best education for the money. You can study anything here."

When students were broken down according to college within Cornell, the College of Agriculture and Life Sciences had the highest percentage of students ranking Cornell as their first choice.

When asked why he chose Cornell, Gray Wirth '89 had no difficulty responding. "That's easy. Cornell has the best agricultural school in the country. At least that is what people say."

While the majority of students rank Cornell as their first choice, their reasons for coming are about as diverse as the students themselves. Reasons ranged from quality of education, to research opportunities, to social life.

King agrees that the ag college is the best around. "I knew that if I wasn't satisfied in one field there were several others which interested me. I started out in biology and now I am a business management major."

Michael Twining '90 applied to Cornell because of the uniqueness of its programming. "I chose Cornell because it is one of the few schools that offers an ag-business curriculum."

The Insider's Guide describes the student body of Cornell as "so diverse, anyone can find a comfortable niche. The radical and the reactionary, the jock-prep and the Bronx Science graduate, the Manhattan sophisticate and the country bumpkin—all rub shoulders at Cornell."

The wide diversity of students at Cornell was largely why Amy Baker '89 applied to Cornell. "There is no stereotype of a typical Cornell student. That appeals to me. The students are all so different yet I have a sense of belonging. Cornell gives you the opportunity to meet people from all over the world who you might not otherwise meet."

Whether students chose Cornell first or third and whether they came here for the research, the education or the hockey team, one thing is for certain. The Insider's Guide to the Colleges hit the nail right on the head when it said "Once you are here, it's easy to fall in love with the place."
Reaching Out
About the Issue

What role does Cornell play in the world around us? In this issue we have looked into how Cornell reaches outside the campus, and how it enhances the education provided to students. We will introduce a Cornell professor who is involved in grassroots communication, the experience of a student in Vienna and how Cornell attracts new students to the ag college.
"WHEN THE CANADIAN INTERNATIONAL Development Agency (CIDA) asked me to deliver a speech about communication at the grassroots, I did not even know what was really meant by grassroots," said Dr. Njoku Awa of the Department of Communication.

Awa accepted the challenge and wrote the speech, which was the keynote address at the CIDA-sponsored International Seminar on Agricultural Communication, held June 21-24, 1988 at the Agricultural and Rural Management Training Institute in Ilorin, Nigeria. The four-day seminar was designed to find ways to effectively communicate agricultural innovation to the rural Third World. CIDA attempted to do this by bringing in resource persons from all over the world.

The role Awa played in the seminar was to lay down the conceptual framework by focusing on grassroots communication. "The term 'grassroots communication' is relative," Awa said. "In highly industrialized societies, it can involve some of the old media such as television and a variety of interactive media such as video recorders. In less industrialized societies, grassroots communication is marked by different interactive media, such as face-to-face talk."

In his address, Awa cited four structural impediments to communication at the grassroots: lack of participation in the development of programs; failure to consult indigenous knowledge; treatment of Western media as the only instruments of mass communication; and the neglect of women in rural development.

"There are several factors affecting participation in the development enterprise and thus the quality of communication at the grassroots," Awa said. "We seem to equate partial involvement of local people with participation; government agencies see themselves primarily as dispensers of aid to local communities; rich and better educated clients are generally favored over poor and illiterate ones in the choice of participants; and participation requires training of local people in decision-making and problem-solving skills."

In order to improve communication at the grassroots, indigenous knowledge—what the people already know and believe—also must be built upon, Awa said. "Indigenous knowledge can be used in conjunction with scientific knowledge to improve the conceptualization of research problems and the development of instruments," Awa said.

Grassroots communication is also impeded by the erroneous belief that modern, Western media are the only instruments of communication for change, Awa said. The traditional face-to-face media provide what we may truly call communication at the grassroots. Their adoption, development and refinement are part of the challenge we face in the decade of the 1990s, Awa added.

"Women account for 60 to 80 percent of the agricultural labor force in some parts of Africa," Awa said. Despite this fact, traditional gender roles remain evident in development policies. For example, when women extension agents reach Third World farmers they dispense information on childcare. At the grassroots, however, the necessity for continuous face-to-face interaction may provide a better opportunity to repair the ravages of women's exclusion, Awa said.

After laying the groundwork for the seminar, Awa was able to spend a few days in his native land. "I was there for six days total," he said. "Nigerians are very protocol-oriented, and they held two days of ceremonies for their guests, displaying the traditional African hospitality," Awa said enthusiastically.

His enthusiasm about the trip carries through to the classroom as well. "Dr. Awa always mentions his summer trip to Nigeria during class," said Jayne Yoon '89. This enthusiasm may turn into another project for Dr. Awa. The Canadian International Development Research Centre is considering publishing the proceedings of the conference, with Awa co-editing the book. Should the project be undertaken, Awa would be kept busy further discovering many new aspects of agricultural communication in the Third World.
SCIENTIFIC
THE COMPUTER

BIOGRAPHERS WHO WADE THROUGH dusty manuscripts in the cobwebbed corners of musty library basements may soon become an image of the past. Successful historians of the future, especially those in the field of science, will most likely turn to a subject's own computer files rather than to a librarian's to gather information about a scientist's life and work.

The computer's ability to function as a word processor, to store information, and to perform complex calculations has transformed the scientific world over the past twenty years.

Some biographers worry, however, that scientists will not save detailed computer records of their writing, research, and correspondence, making it impossible to learn about their subject's life. This concern is rejected by many of today's researchers, who are convinced that the computer's use in science has far more advantages for historians than drawbacks.

One of the greatest problems for historians of science is obtaining records of scientists' published and unpublished work. Quite often, biographers are interested in the transformation of scientific ideas as scientists revamp, revise and reorganize them during the writing process. In the past, when writing was done in longhand or on the typewriter, scientists tended to keep several drafts of each paper. Later historians could then study the evolution of a scientific discovery.

Since the advent of the computer, however, the examination of these subtle differences between rough revisions and the final product has become more difficult to the historian. Many of today's scientists, for example, save only the finished copy of a scientific paper.

Professor Aaron Moen, natural resources, said that a future historian may have trouble examining his work because Moen erases all rough copies from his computer's memory.

Professor Antonie W. Blackler, zoology and genetic development, also saves only the finished copy on his computer when he writes. But Blackler is convinced that this will not be a problem for future biographers.

"I use the computer's remarkable hierarchical system of organization and storage to record my thoughts as I go along. All these bits of information, stored on 'index cards' inside the computer, should provide more than enough information for tomorrow's historian about what was going on in my mind during the writing process," Blackler said.

James P. Sethna, an assistant professor in the Laboratory of Atomic and Solid State physics, points out that while some information may be lost when revisions are trashed, computers permit scientists to keep more of their work than they ever would have in the past.

"In the 1800's and early 1900's only the real gems of papers ever got published. Now, because of computer automation, many more papers are being written and much more information is being saved. A scientist's whole life can now be stored on the computer," Sethna added.

Professor L. Pierce Williams, who works in the field of scientific biography, also agrees that the scientist's use of computers in writing will not pose a detrimental impact on the job of the future historians, and may in fact make research easier. Williams thinks that the computer should be viewed as a tool, like the typewriter or copy machine.

"It doesn't matter that scientists now have a new tool to play with. What matters is the extent of their organization in recording and filing away their work," he said.

Williams believes that future biographers will probably go through many of the same troubles that historians today face when it comes to rooting up the "goodies" of the scientists they are studying. But, if scientists carefully save all of their work on floppy disks in a manner that is orderly and readily accessible, the computer may prove to be a tremendous time-saver for the biographer, Williams added.

On the other hand, a few historians believe that computer files which are
too well-organized may not accurately represent the actual progress of a scientific experiment. The computer can "cover up tracks" by eliminating records of mistakes made during an experiment, according to Professor William B. Provine, history of science.

Provine, who has had much experience writing scientific biographies, believes that this aspect of computers will cause problems for historians in the future.

"It just takes too much time and trouble for scientists to be bothered with saving preliminary drafts. As a result the computer becomes an ephemeral tool," said Provine.

Today's computers permit scientists to perform tasks far more complicated than word processing. The capacity of some computers to perform complex calculations, construct perfect simulations and store mass quantities of information has transformed the work of scientific research during the last few decades.

Historians wonder, however, how effectively scientists document this research. How much and what kind of computer data do scientists store during their experiments? Will biographers of tomorrow be able to study handwritten log books detailing an experimenter's every step as in the past?

Sethna is convinced that the records scientists keep today are probably more thorough than years ago. Sethna, who has access to personal storage space on the computer mainframe system in the physics department, handwriting nothing in notebooks, preferring to keep a log book in the computer's memory.

"While scribbling your thoughts on a computer may be hard for some to do, it's probably more thoroughly organized and much easier to read," Sethna said.

The documentation of scientists' research may have a darker side, however. According to Williams, there has been a recent trend, especially in the field of organic chemistry, for scientists to work for months generating problem-solving computer programs which are saved only in final form.

"When the body of research is done on the computer, scientists tend not to keep an accompanying log book which discusses their efforts. As a result, future historians may have no record of how the program was revised and developed," Williams said.

But, according to Professor Roald Hoffman, chemistry, if log books are faithfully kept, the use of computers may prove to be one of the best things to ever happen to his field. He thinks that the computer is a "wonderful research tool."

"Right now, we can develop a remarkable computer program to calculate data and then save this program so someone ten years from now can come in and use it in exactly the same way we did," Hoffman said.

Historians will have access not only to scientists' computer programs but also to their libraries of letters, saved in the computer's memory rather than in file cabinets. Modern computer database systems permit scientists to keep track of what they've written in letters sent to colleagues and science journals.

Only time will tell how the substantial increase in computer use by scientists during the last twenty years will influence science-biography writers of the future. So far, the computer has permitted researchers to take great strides in all fields of science.

But recently, scientists and historians have begun to recognize that in order to document this progress for posterity, today's researchers must preserve records of their computer use.

Scientists and biographers agree, however, that if detailed files are kept, tomorrow's historians will find learning about a subject's life much easier than in the past. In fact, if they are lucky, most future biographers will spend their time in front of a computer, rather than in a library cellar, up to their elbows in a crate of manuscripts.

by Sunny Edmunds '89
WHAT IS IT ABOUT CORNELL THAT takes hold of a person's heart and refuses to let go? Students come and students go and Cornell will always be a part of them. But for some alumni this is not enough. They choose to remain a part of Cornell.

Cate Thompson '83 is one of those people who could not get enough of Cornell as a student and chose to return as a member of its staff. In the spring of 1982, she graduated from the College of Agriculture and Life Sciences with a general studies degree, concentrating in sex education and counseling, and took a position in a sales training program with a department store in New York City. "The training program helped me to find out that I really hate doing business. I am not a business person," Thompson said.

While an undergraduate, Thompson participated in the work study program as a counselor in the Office of Student Services in the ag college. Six months after graduating, Thompson was offered the position of Counselor of Student Services.

While her primary responsibility is the minority affairs program, she admits that her position requires her to dabble in a little bit of everything. "Recruit minorities and review their folders, all the things that admissions people do. In addition I counsel students in both academic and personal matters. It can be anything from 'I'm homesick' to 'I don't want to deal with life anymore' to 'Help, I'm failing biology.'"

Donald Burgett '62 MS '67 PhD '70 serves as the coordinator of the Office of Student Services. Like Thompson, he decided to return to Cornell as a staff member.

Burgett feels that fate played a part in his career path, and indeed the circumstances surrounding his accepting a position with Cornell suggest this.

"At the time I received my doctorate, the job opportunities in teacher training were not plentiful. Only one job opened up but it was in Bozeman, Montana. The department there was not that strong at the time so I did not have an incentive to leave Cornell," he said. "At the same time a position opened up in the admissions office of the College of Agriculture and Life Sciences."

Burgett postponed accepting the position for nearly two months because it was clearly not the career he had intended to pursue. "I kept hoping something would open up in my field of study," he said. "The College needed to fill the position, and I decided to accept. I loved Ithaca and had established a lot of close friendships so I decided to take the job. Ironically, about a month later two jobs in my field opened up."

In 1971 Burgett became the College Registrar. Later, the Registrar's position was split into two positions and the Office of Student Services was created with Burgett as the coordinator. He is responsible for the advising system in the ag college, which includes making advisor assignments and training new advisors. In addition, he organizes new student orientation and counsels students.

"My job is really exciting because I never know who might come through my door. There are 3,000 students out there, each with their own unique per-
sonality and problem."

While both Thompson and Burgett thoroughly enjoy their positions, neither ever dreamed, as undergraduates, that they would someday be employed by their alma mater.

"I thought I would probably go on and get a master's degree and then obtain a counseling position at a university," Thompson said. "I never thought Cornell would be that university."

"As an undergrad, I was studying agricultural education in the hopes of teaching high school agriculture," Burgett commented. "In fact I never even considered working for any university until I was working toward my PhD."

There are a lot of assets in working for your alma mater, both Thompson and Burgett agreed.

"Cornell is my second home. I know the place like the back of my hand. It feels so comfortable," Thompson said. "I worked in the office as an undergrad so most of the people in the building already knew me."

Burgett also stressed familiarity but included the whole Ithaca community as an asset. "I was not your average, traditional student in that I never experienced dorm life or joined a fraternity," he said. "I worked my father's farm for six years after graduating from high school. When I came to Cornell, I was 26 years old and married. My wife and I lived in an apartment in Ithaca and many of our social ties were to other married couples outside the Cornell community."

As with all new jobs, there was a definite adjustment period. But the adjustments, on the other hand, were not typical of all new jobs.

"I was only 23 when I became associate coordinator, not much older than many of the students I was counseling. In fact I counseled some of my classmates from this person."

What words of advice did this dynamic duo have for Cornellians who might be interested in a career at Cornell? Both agreed that campus involvement as a student is key to continuing that involvement later.

"While I was getting my doctorate I held an assistantship in the Office of Instruction. When the admissions job opened up, they knew who I was and that I would be seeking a job soon," Burgett said. "Students can get exposure through work study jobs, indepen-

"...get out there and learn the skills and meet the people as an undergrad. Cornell has so much to offer to those who take advantage of their opportunities."

Cate Thompson, counselor of Student Services, speaks to student advisors on how to advise other students regarding educational and personal matters.

"Thompson was also very active on campus as a student. She firmly believes that her experiences as an undergrad were the reason she was offered the position with student services."

"I had done nearly every facet of this job as an undergrad. I was involved in breakfasts and lunches with the dean, admissions recruiting and counseling," she said. "My predecessor knew this and recommended me for the job when she took a leave. I cannot stress enough the importance of getting out there and learning the skills and meeting the people as an undergrad. Cornell has so much to offer to those who take advantage of their opportunities!"
Learning for Life

DR. J. E. FORTUNE, ASSOCIATE PROFESSOR of Physiology, teaches a course for life: a course that, by examining the biological function of reproduction and evaluating sex differences in relation to contemporary society, guarantees students valuable knowledge that will last a lifetime.

Biological Basis of Sex Differences is a course designed to teach students the important information about sex differences between genders. Fortune's goal, on one level, is to create a greater awareness of all sex characteristics as they relate to each student.

"This (course) is giving me a better understanding of our own sexual functions and behaviors," stated Jason Haas '89, who is presently enrolled in the class. Providing her students with a general knowledge of reproductive biology by studying the structural and functional differences between sexes is one objective Fortune attempts to achieve.

Furthermore, Fortune examines some important aspects of reproduction which are valuable to the students' personal education. One is contraception and its future development in today's society. She observes that knowledge of contraception allows students to make choices for themselves by understanding their reproductive functions.

Students are also presented with facts about infertility and the role medical technology can play in the conception of human life.

According to Fortune, another valuable aspect of the course is the study of how gender affects functions that are not directly related to reproduction. This entails looking at the behavioral, mental and physical capabilities and their relation to sex differences.

While Fortune stresses important points as they are taught, there seems to be a greater subliminal emphasis on what is learned. Fortune's lectures provide insight. She attempts to stimulate students' attitude to evaluate critically what they may read or hear outside of class in light of what has been learned in class.

Haas noted Fortune's method of productively manipulating students into comparing course material with today's ideas of sexual reproduction. "The class seems to provide a framework for society's views and attitudes toward sex differences. In turn, this provides us with an objective perspective," he said.

For example, a key part of Fortune's course presents forces that affect the role of contraception in today's society. "Society demands life to be risk-free," she said. This concept is relevant in the medical profession where "risk" is reduced by the administration of drugs. Yet today, although a prime method of contraception is a drug, society sees it as a risk. This view, according to Fortune, has hindered the development of newer and safer methods of birth control.

The other societal force Fortune sees lies in the decision-making process people observe when using contraceptives. "People don't want to think of risks in drugs," said Fortune, "but in reality, they must balance risk versus benefit." Whether the relevant risk of pregnancy outweighs the unknown risk of drug-induced birth control, depends on the individual's situation.

Ingrid Storer '89 said, "The class adds more of a biological knowledge to what I already know. Professor Fortune provides us with the information so we may hypothetically make our own decision."

Fortune's course also emphasizes the knowledge of how science works and the degree to which biology is subject to change and social interpretation.

To illustrate these points, Fortune poses the question whether basic sex differences are determined by biology or culture. "This is very hard to determine," she said.

Although society sees these differences to be biologically related, there is evidence that our culture teaches each gender to assume different roles. Fortune also noted, however, that differences between genders we perceive to be influenced by society may actually stem from biological factors.

For instance Storer, commenting on course lectures, believes that her acceptance of all the factors that affect sex determination is greater now than it was before taking the course. "The class has given me a clearer understanding of differences in sex roles," she said.

Using these two issues, as well as others, Fortune attempts to illustrate and teach her students about society's use of biology to fight its social battles. "I want to show my students how inappropriate this is," she said, "and provoke them to think and challenge some of our cultural biases."

It seems apparent that Fortune's motive behind the course is to teach the students more than the biological basis of sex differences. Rather, she wants to educate them about different ideas and attitudes so they may achieve a broader perspective of themselves and the world in which we live. Therefore, it seems Fortune does indeed teach a course for life.

by David Oliver Holcomb '89
WATCH OUT CORNELL! THE HEALTH improvement attitude of the 1980s has finally reached campus through the Faculty-Staff Wellness Program.

The Wellness Program at Cornell University began its pilot project in fall of 1988. Leading the program are health educators David Harackiewicz and Toni McBride. The Wellness Program is designed to improve each participant's health through exercise. Currently there are 30 participants composed of staff and faculty from both the College of Agriculture and Life Sciences and the Johnson Graduate School of Management at Cornell University. According to Harackiewicz, "We only targeted two groups at Cornell because the project is still in its pilot stage."

The Wellness Program is funded by donations from alumni and membership fees. Participants are charged $125 each semester. The Department of Athletics and Physical Education at Cornell is sponsoring this extensive project which mainly takes place in Helen Newman Hall.

The comprehensiveness of the Wellness Program is evident in the amount of screening that took place before the project actually began. Harackiewicz explained the procedure. "We tested the participants thoroughly by using several different measurements. We assessed stress levels, cholesterol counts, vital capacity, percentage of body fat, flexibility, strength, endurance, and many other facets of each person's total health." Participants also answered many questions concerning their exercise preferences and personal health habits in private consultations with the program directors.

Each participant was then given an individualized exercise program to follow. Harackiewicz added, "The importance of conducting such an extensive physical fitness preassessment is to prevent any injuries from occurring."

The individualized programs consist of many different activities. Bicycle riding, rowing, swimming, aerobics, and weight training are just some of these various activities. Participants exercise three times a week in 30-60 minute sessions.

Although exercise is the crux of the Wellness Program, it is not the only focus. Nutrition seminars, stress management programs, and lower back pain programs are planned for the members. There will also be a follow up assessment to monitor the progress each participant has made and to offer suggestions for future goals.

Cornell's Wellness Program is not the first of its kind. Many other universities have similar programs. Dartmouth has been sponsoring a exercise program for the past two years. Exercise programs have already been established in many corporate settings throughout the country.

Why has Cornell gone to such an extent with an exercise program? "Exercise programs, such as our Wellness Project, have many benefits. Research has shown that these programs improve the general atmosphere of the work area in several ways; stress is reduced, employee sick days decline, and company insurance payments go down. Morale increases and there is an overall improved attitude among coworkers," said Harackiewicz.

Apparently there was also a great need for such a program at Cornell because when Harackiewicz and McBride announced their program, they received 200 applications for only 30 positions! "We had to use a first come first serve basis to chose the 30 participants," said Harackiewicz.

Reactions to the program have been very encouraging. Joanne Parsons, who participates in the Wellness Program said, "I enjoy the support I receive from other members and the directors." Another member, Janene Gargiulo, explained, "I love the program because of the motivation involved and I'm already noticing improvement in myself."

Harackiewicz has also gained a positive feeling from working in the Wellness Program. "My biggest joy is watching the participants gain a new sense of confidence and self-esteem when they exercise."

Future plans for the program include expanding the number of participants from 30 to 100. "Eventually we would like to open it up to the entire University," said Harackiewicz. Many of Cornell's faculty and staff are ready and waiting to participate in this worthwhile program. It seems as if the Faculty-Staff Wellness Program has arrived just in time.
SITTING ON THE STEPS OF A PORCH leading into the kitchen of his family's home in Gorham, Maine, Patrick Andrew tried to decide what sport he wanted to play when he entered Cornell in August, 1985. He thought about how much he had enjoyed playing soccer in the fall, how much he relished starting for the basketball team during the winter, and how much he learned while playing lacrosse in the spring.

He sat for many hours, a soccer ball anchored between his ankles, staring out at the barns where his father kept the fifteen thoroughbred horses the family owned. He picked the soccer ball up, propped it under his arm, and headed for the stables. He walked to the edge of one of the stalls, and dropped the soccer ball as he put his hand into a bag of feed. Opening his fist, he let the occupant of the stall, a tall, brown mare with white ankles, lick the oats from between his fingers. He stood stroking her neck and decided he would play polo at Cornell.

Andrew spent that summer preparing for Cornell’s polo program, a program in which he had been very interested since deciding to attend the College of Agriculture and Life Sciences to study animal science.

“I realized that I would probably end up playing second or third string if I wanted to play for the soccer, basketball, or lacrosse teams,” Andrew said. “I enjoyed playing those sports in high school, but didn’t really know if I could excel in them at the collegiate level. My dad played polo and encouraged me to practice,” Andrew said. “Since I began playing at Cornell, we’ve played together in a league during the summer. The first couple of years we didn’t do very well. Last year we took three of the four tournaments we played.”

Indoor polo is played with teams of three riders; each rider is numbered one, two, or three. Rider one is primarily an offensive player and rider three, a defensive player. Rider two plays both offensive and defensive positions. “The two position is like the midfield position in soccer or lacrosse,” Andrew explained. “It’s the easiest position to play because you can be all over the place. You’re not an optimist like number one and your not a pessimist like number three; each of them either wants to score or defend the goal,” he said, referring to the roles each rider plays on the field. A match is divided into four, seven-minute chukkers, or periods. At
the end of each chukker, riders give their horses a rest by trading them for fresh ones.

"Outdoor polo differs from indoor polo in several ways. The outside field is tremendously larger than the one we play on inside," Andrew explained. "Indoor polo is a lot faster. You can't make mistakes because you have no time to retrieve the ball. I love the speed of the game the most," he said. Another difference between outdoor and indoor polo is the number of competing riders: outdoor has four, indoor has three.

Polo players are rated based on their ability and average scoring record. According to a ranking system used by the National Polo Association, most novice players are rated between minus-two and minus-one goals. A skilled player would be ranked anywhere from zero to five, while exceptional riders would be rated between six and ten. When Andrew arrived at Cornell, he was rated at minus-one goal; he is rated currently at two goals.

"Polo is a sport where you can constantly develop and refine your skills and techniques," Andrew said. "I like it because I am constantly learning new techniques in practice and in games. I learn a lot by just watching other players."

A polo player is always trying to perfect any number of the complicated shots used regularly to defend a goal or score against an opponent. The rider must not only be confident with the accuracy of his swing, but also with the endurance and intelligence of the horse on which he rides. "You really get a feel for each horse's personality during practice. You know what will work with some versus what will work with others," Andrew said.

Each year the men's, women's and novice teams get together and mix among themselves to compete at Cornell. Gregory D. Graff '91, a novice team member during the 1987-88 season said, "Patrick is the reason our trio won last year. He's started for three years and has really picked up a lot of tricks and skills. He's great to have on your team."

At the end of the 1988 spring season, the men's polo team was ranked second in the nation behind the University of Virginia. "We play really well and we have an excellent program in which players may hone their skills. UVA has the advantage of recruiting players from prep schools and other places where polo is strong. These guys are rated at three or four goals and they're only eighteen or nineteen years old," Andrew explained. According to regulations, no member college or university of the Ivy League may recruit athletes for intercollegiate competition.

The new Equestrian and Riding Center had a major impact on the polo program and its players, according to Andrew. "The new center is great because it is so much larger than the old [Oxley Polo] arena. Larger crowds come to watch us now and we can raise more money at each game," Andrew said. "I think it's great when people come to watch us play; it gets the team's energy going."

According to Andrew, a major element of any polo game at Cornell, as any fan may attest having seen at least one match, is the undying energy and enthusiasm of the team's announcer, David Drogo. "Dave's been announcing for the men's and women's polo teams since before I arrived at Cornell," Andrew said. "He gives the spectators great explanations about what is happening. People don't feel confused when he announces because he lets everybody know what's happening. He also does a great job filling in when the action is slow," he added.

When he's not practicing, playing, or travelling with the polo team, working in the mailroom on west campus, or catching up on current events, Andrew studies animal science, hoping to attend veterinary school next fall.

"I'm not really sure what I want to do. I'd like to go to vet school and study to become a horse doctor or breeder. I'd really like to work with thoroughbreds," Andrew said. He is also considering a career in secondary school education. "I'd like to try working on a degree in education and then going to teach high school science somewhere," Andrew added.

Andrew hopes this year's polo season goes well and that he may continue riding up and down the arena between his two teammates. He also confided that he wants to finish ahead of UVA before he graduates. □
Cornell Greens:

An Alternative

"WE ARE NEITHER LEFT NOR RIGHT; we are in front."

This statement summarizes the philosophy of the Greens, a grassroots political and social movement that rose up in Germany in the late 1970s. The movement has since spread to much of the world, including the Cornell campus.

While attending Clark University, Gabe Selig '89 read several books on the Greens and was enthralled by their ideas. Transferring to Cornell in 1987, he expected to find a Green group already on campus. Finding none, he decided to start one himself. Soon he met three other people with whom he set to work organizing the group—The Cornell Greens: An Alternative Design for the Future.

The Greens' goal is to replace outdated "patriarchal" values with a fresh, forward-looking view. This includes challenging and changing many of society's current priorities and practices. Green beliefs are based on several main values—ecological wisdom, non-violence, social responsibility and grassroots democracy. Within this philosophical base, the Greens encompass a broad range of issues.

Primarily, a belief in social ecology underlies all Green thought. This is the idea that human life and its structures depend on respectful and careful interaction with the biosphere. "Ecology and the environment is interwoven throughout everything we do. People can't divorce themselves from that truth," Selig said.

From this ecological belief stems a systematic view, looking at the world in terms of inter-relationships. Every bit of nature and every human action is embedded in a larger whole. No part can be changed without affecting the rest of the system. So, for example, carbon dioxide in the air may cause immediate pollution problems in the locality, and may lead to warming of the earth, which in turn leads to other larger environmental changes. Or, on another level, the systems theory might look at how sexist language supports other manifestations of sexism.

Green philosophy intertwines "a respect for the environment, respect for other people and their diverse ideas," said Cornell Greens co-founder Pamela Timm '89. Such a belief mandates fostering a free and open society. This supports a second Green value, which is non-violence and the use of non-violent methods to achieve goals.

A third value, social responsibility, activates Greens to work at solving the important issues of today and tomorrow. "Green philosophy deals with reality in a way traditional parties do not," said Christine Davidson '91, another group co-founder. This includes recognizing the environmental and social problems other political groups often ignore. Social responsibility also means dealing with the underlying values that cause the more specific problems. Indeed, Greens believe action should take place on all levels, from personal to global. "Also, the Greens look to the future and plan for the future," Davidson said.

The final Green tenet is participatory democracy. "I always felt turned off by traditional two party American politics," Timm said. "It seemed like the political system had potential that wasn't being used." Green values advocate that decisions be made at "an appropriate level," with local governments playing a large role.

"I strongly believe that decentralization is important," said Selig, who has worked for an environmental lobbying group in Washington, D.C. "The federal government is too big and too insulated. Washington, D.C. exists in a vacuum where officials can't feel or taste their decisions."

"Decentralization means more people participating in decisions that affect..."
Green ideas are far-reaching and holistic, which sometimes makes them difficult to grasp. "Green philosophy is broad and all-encompassing," Davidson said. "On one hand, it can seem amorphous. But on the other hand, Green ideas allow for a lot of different kinds of people to work together," Davidson said. People who are interested in specific parts of the Green agenda, for example issues of environment or sexism are brought together within the wide scope of the Greens.

"The broad base forces you to think for yourself and keeps Green politics from becoming stagnant," Davidson added. "Greens are always debating and redefining, exploring issues among themselves."

On campus, the Cornell Greens have grown to around 40 active members. The list of successful Green events is quite impressive for a group that has been around less than two semesters. In spring 1988, the Greens organized an Earth Day celebration with music, games, and information tables, as well as a candlelight ceremony celebrating conservationist John Muir's birthday. Along with giving informal talks about Green philosophy, the group sponsored the movie Koyaniqsuatsi, which is a visual commentary on modern lifestyles, and worked on campus recycling efforts. In addition, they ran environmental workshops for local children, featuring thought-provoking games highlighting social and environmental dilemmas.

Recently, the Greens distributed informative pamphlets on the presidential candidates' records and policies. They have also sponsored a visit by Cynthia Wilson, Executive Director of Friends of the Earth, whose lecture was titled "Where have all the tree-huggers gone?"

The Greens hope to achieve further goals, too. Timm said, "One basic goal is to educate the Cornell community about the things it does and how they relate to Green ideology."

Davidson added, "A primary goal is to expose the Cornell community to Green thought, so that people realize that it's an important social force. Another thing I'd like to see the Greens do is bring to the front issues which are ignored or trivialized."

"We hope to work to improve human inter-relationships on campus, like respect for diversity. Many differences are not celebrated or even accepted here," Davidson said.

Part of Green activity may include working in cooperation with special-interest campus groups that are involved in Green concerns. For example, the Greens are working with members of the union of concerned scientists to compile policy records on companies which recruit at Cornell. Other activities may include working with groups addressing sexism, racism and nuclear disarmament.

The Cornell Greens is just one of the new Green groups working to educate people and initiate change. Elsewhere in the United States, the Green movement is slowly growing, Selig said. Green candidates have won elections in several places, including New Haven, Connecticut; Attleboro, Massachusetts and Orange County, North Carolina. The Committees of Correspondence, the central Green network, is solidifying the national Green organization. One organizer of this network estimated that there are over 150 Green groups in the nation, with many other groups involved in Green-related activities.

Cornell has not been left behind. As one link in a larger movement, Cornell's Greens are staying out in front, creating an alternative vision of the future for Cornell and for the world.

by H.J. MacKay '89
During the energy crisis, NRAES published innovative “Fact Sheets” about how to properly insulate homes, heat homes with wood, and other information to beat the high costs of utilities. After the 1976 release of the Fact Sheets, NRAES sold over 200,000 copies a year, according to Paula Solat, NRAES administrative aide.

How did NRAES originate? “NRAES was founded in 1974 to assist northeast agricultural engineers and related specialists in promoting information sharing and reducing duplication of efforts,” according to an NRAES brochure. NRAES, a non-profit organization, works as a publishing house for the Cooperative Extension of the northeast. In New York state, Cornell Cooperative Extension is a member of NRAES.

NRAES receives financial support from its members, 12 northeastern land grant universities and the District of Columbia, sales of publications, and revenues from conferences and grants, according to Martin Sailus, NRAES manager. The member states are Connecticut, New York, Massachusetts, New Hampshire, Pennsylvania, West Virginia, Delaware, Rhode Island, Maine, New Jersey, Maryland, Vermont and the District of Columbia.

Cornell University sponsors NRAES by providing office space for the organization. NRAES uses the University account system and NRAES workers are employed by Cornell.

NRAES cooperates with many departments from various colleges at Cornell in producing new publications. From the College of Agriculture of Life Sciences, members of the Departments of Agricultural Engineering, Agriculture, Agricultural Economics and Animal Science have participated. “Originally NRAES only consulted with Extension agricultural engineers, but we’ve recently begun to broaden our scope to include Extension specialists from other disciplines as well as researchers,” said Sailus. NRAES book topics cover information that several or all the member states need.

How is a publication created? First someone generates an idea. NRAES members, Cooperative Extension agricultural engineers, and the NRAES manager meet and discuss the idea. Members then discuss whether the proposed publication is regionally needed. A standing work committee is formed and later an authors’ committee, consisting of experts in the field. They develop the rough draft and NRAES reviews it and proposes changes.

The manuscript is sent out for a “peer review,” a critique by members and experts, both regionally and nationally. Following perusals by professionals, the manuscript receives a final edit and is designed at NRAES. The text is printed and NRAES distributes it. “From start to finish, the process takes about one year,” Sanders said.

NRAES sells an estimated 40,000 books annually as well as 400 computer software programs. NRAES grosses $70,000 a year in publication and computer software sales, according to Sailus.

“Production has gone up 500 percent since we started hiring student help,” Sailus said. Students work in editing, design, and distribution of NRAES products. “The work gives students a great opportunity to gain practical experience,” Sailus added.

NRAES’ three full-time and 12 student part-time staff may be small, but they produce many useful publications for students, homeowners, farmers, professionals and others across the United States and in developing countries around the world.
MANY HEADS TURN AS A MYSTERIOUS white truck with a large saucer on its roof passes through campus. It has the look of something from the future, something beyond our comprehension. Those who peer closer expecting to read the words NASA or U.S. Government are surprised to discover the name on the side, Cornell Media Services.

The saucer-topped truck is more accurately referred to as a Mobile Satellite Uplink Truck. Why does Cornell Media Services need such a high-tech machine? To find the answer to this question, it is necessary to have a better understanding of what Cornell Media Services does.

Cornell Media Services was created to help the University's two land grant colleges, the College of Agriculture and Life Sciences and the College of Human Ecology, fulfill their obligation of extending their research and training base to the people of the state through the Cooperative Extension Program. The Cooperative Extension Program is designed to help Cornell fulfill that obligation by sending agents specializing in areas such as agriculture, personnel development, and others to all county offices throughout New York state. By producing publications, informational and training films and slide shows, Media Services has been able to assist Cooperative Extension in extending the results and benefits of research done at Cornell to state agencies throughout New York.

The Satellite Uplink Truck came to Cornell in January, 1988, as a gift from a small number of anonymous donors. The truck allows Media Services to bounce a visual and audio signal off a satellite to be seen anywhere in the North American continent. One effect of this technology is to make the Cornell faculty available to the media, as well as any other research institution capable of picking up a satellite transmission. Thus, if CBS News, which in the past has sought interviews with Alfred Kahn concerning current economic issues, wished to do so in the future, they could do so live on very short notice. Another example of the truck's usefulness was a recent panel in Paris which Professor Carl Sagan participated in while sitting in a Cornell studio room.

While the truck has already proven useful in such circumstances, Media Services Director David Watkins wants to see it used more as a tool to help Cornell spread its research base throughout New York state. "I see distance learning as one of the future uses of the truck," Watkins said. "If we could update the training of our coop extension reps weekly through this kind of transmission, rather than bring them back to Cornell every few months, we could improve the effectiveness of the Cooperative Extension Program and save a lot of money."

In order for distance learning to work, satellite dishes designed only to receive signals must be placed in all county offices. Satellite communication would allow more continual training of the coop agents and eliminate the need for frequent travel to the University by these agents, and to the offices by the Cornell faculty.

"New York is a huge state, and there is a great deal of money to be saved by cutting out the travel expenses incurred as a result of the coop program," Watkins pointed out.

Watkins feels the satellite truck can be utilized by many of the colleges at the University. In the future, he hopes to see the hotel, veterinary, and ILR colleges implement training programs via satellite. He also foresees the possibility of putting receiving dishes in various alumni associations throughout the country for the purpose of broadcasting Cornell sporting events, and raising donations.

"We're just starting to realize all the things we can do with this new technology," Watkins said. "Seeing some of these ideas come to life is just a matter of time."

by Tom Hostage '89
ONE OF THE MOST DIFFICULT DECISIONS a person must make in life is which career path to follow, and how to go about getting what he or she really wants. Quite often, people will graduate from college and get jobs in areas they never really thought of as careers, and then later return to graduate school to pursue particular interests. For instance, most people who go to business school generally work in the "real world" for at least two to three years before deciding to return to college for a Masters of Business Administration (MBA) degree, according to the Office of Admissions at Cornell University's Johnson Graduate School of Management. But Cornell has instituted a unique business program for its outstanding undergraduate students who are interested in receiving their MBAs soon after graduation. It is called the Five-Year Bachelor's/MBA Program.

The five-year plan is simple: students apply to the business school during the winter of their junior year, and, if accepted, they finish their senior year classes along with taking first year business core courses. The following year, they receive their MBA.

Competition for this opportunity is fierce. The School accepts only 18 of the approximately 50 students who apply each year. Many of them are agriculture economics majors, although any Cornell undergraduate is eligible. Admission requirements, however, are stringent.

According to the School's admission's office, a student interested in the five-year plan should have a higher grade point average and a higher GMAT (Graduate Management Admission Test) score than the average scores for the rest of the School.

After being chosen on academic merit, past business experience, and college activities, competitive candidates must also go through an interview with either the Assistant Dean or the Director of Admissions. "The interview was fairly relaxed," said Audrey Berg '88 MBA '89. "They were really interested in what I had to say, which made me feel good."

"I was surprised they let me in after my interview," said Debbie Perch '88 MBA '89, who was an agriculture economics undergraduate. "When they asked me to comment on the economic situation of the United States, I told them that I really hadn't paid much attention to the economic situation of the U.S. in the past few years, and that it wasn't really my top priority of concern. They just laughed and went on with the next question."

Once these talented students have been admitted to the business school, their first responsibility is to juggle their senior year courses (usually the remaining requirements needed to graduate) with their first year business core curriculum.

There are two ways in which to manage this task. First, many of the students only have one or two undergraduate classes to complete, so they can concentrate on their new business courses. Second, since many of the students have been trained in some of the core subject matter, the Johnson School allows them to take exemption exams in certain subjects. By doing well on these exams, a student "places out" of these subjects, which allows him or her more time to pursue other academic interests, said Perch.

"I did not have much problem with the exemption tests," said Jim Conti '88 MBA '89, "but I never would have made it through my senior year without them."

The number of senior classes that students need to take and the number of classes they are allowed to exempt directly affects how much the students enjoy their senior year, a time which many students like to remember fondly. Some students try to take senior classes which are not business-related so that they can have a break from all the numbers and jargon at the business school, said Perch.

Both Perch and Berg took only two or three undergraduate classes in their senior year, leaving them time to con-
MERGER

centrate on their first year graduate classes. Although she took all Johnson School courses in the second semester of her senior year, Berg decided to "have fun" for the remainder of her undergraduate life. While still keeping ties with her undergraduate friends, she also managed to get to know many of her fellow MBA students, although many of them were significantly older than herself. "I said to myself, Audrey, your friends are graduating this year, and you're going to be left here. You have to do something about that." said Berg.

For Conti, however, senior year was a little more hectic. "I had many responsibilities to my undergraduate curriculum," said Conti. "I had a much more rigorous senior year than normal, and 95 percent of them have had full time work experience. Some of the five year students experienced a little bit of hostility from some of the older students.

"In the beginning, I felt like I really had to prove myself. Most people wondered why we were there. But now, in the second year, everything is about equal," said Berg.

"The age differences are obvious," said Conti. "The biggest difference that I have found between the two groups is that the older students have the experience to base their education on. They are more career-minded than we are."

Despite the social problems, many of the five year students feel that the experience of their classmates is a positive contribution to their education. "Because our homework is all based around case studies and group projects, we probably learn more from our classmates than we do from the teachers

financing with real estate when I get a job," said Conti.

According to William N. Alberta, the Director of Career Development for the College of Agriculture and Life Sciences who recently lectured in a business related agriculture economics class, 72 percent of the working population in the United States works in business. These five year students are ahead of the game; not only have they received a prestigious undergraduate degree, but they will receive an advanced MBA, as well. When they graduate, they will both join and manage that 72 percent of the working population. How does that make them feel? Perch summed it up in a few words: "What an honor."

by Kiersten S. Fries '90
FOR MANY PEOPLE TODAY, CHOOSING
a career can be a somewhat painful
process and finding a job once they
have decided what they want to do can
be that much more taxing. No one is
immune to these problems, but stu-
dents are particularly vulnerable in this
respect. Good, sound advice and a
helping hand to point students in the
right direction could mean the differ-
ence between getting a head start in a
chosen professional field or not.
This is where the job of peer advis-
ors in the College of Agriculture and
Life Sciences Career Development Of-

cine comes into play. This group of six
students works along with a profes-
sional staff of two career counsellors
to provide invaluable career informa-
tion and options for both graduate and undergraduate
students, as well as alumni of the ag college.
Since their job as peer advisors en-
tails an enormous level of responsi-
bility, they are chosen "very care-
fully," said Bill Alberta, Coordinator of the Career
Development Office. Peer advisors go
through a three-step interview process
and an application process in order to
get the job. They are interviewed not
just by Alberta and the Assistant Coor-
dinator, Cathy McCormick, but also by
the support staff and returning peer
advisors. This process is especially
important since teamwork is stressed
among everyone who works in the
office. Following the interviewing pro-

cess, peer advisors must also go
through a series of training sessions to
prepare them for their diverse job
responsibilities. Therefore, in a sense,
the peer advisor job is unique from
many other college work study posi-
tions in terms of the selection process
and the amount of training it entails.
"They really have to enjoy serving
students and they have to be the shar-
est people we can get," said Alberta.
"We count on peer advisors to assist
people—students, employees, alumni
and faculty who come to the office, and
they act like public relations people
when it comes to recruiters," said
Alberta.

According to third semester peer ad-

visor Dennin Brasch '89, the job is
mostly an "interactive" experience.
Each peer advisor is trained to develop
quality resumes and stage videotaped
practice job interviews for students
who come into the office requesting
these services.
In addition, each peer advisor has a
special office task for which he or she
is responsible. One of these special tasks
includes the computerization and up-
date of the career library which con-
tains descriptive career books, employ-
er directories and salary listings. For
careers such as bioengineering and
sports management for which there is
little or no information in the library,
the peer advisors do extensive research
to come up with information that
would otherwise not be known. Peer
advisors also categorize and file several
thousand full-time and intern positions
which employers release to the office.
Although peer advisors have their in-
dividual tasks, they must nonetheless
be familiar with all aspects of the office.
This is especially important consider-
ing that no two students who come
into the office for help have the same
concerns.
"There is no most common problem
that people come in with. Every ques-
tion is individual and different," said
veteran peer advisor Christy Roe '89.
The ability to deal with a variety
of students from different majors
with varying concerns is clear evidence
of these peer advisors' job skills and
knowledge.
"People come in at all different levels
of career development," said Brasch.
"Some come in an absolute state of
confusion," he added. Brasch stressed,
however, that it is the job of the peer
advisor to allow people to sort through
their own confusion by giving them a
chance to explore all career possibilities
that interest them.
"We don't write resumés for people,
for example," said Brasch. "We teach
them how to write resumés." This, said
Brasch, will teach people how to write
a resumé if no one is there to help them
the next time.
By helping others, peer advisors help
themselves. "This job has taught me a
lot besides how to write a resumé. It's
taught me a lot about how to deal with
people," said Andy Butler '89. "I wasn't
as people-oriented before as I am now."
In addition to getting to know peo-
ple, the job gives peer advisors an extra
dge over the average Cornellian in
career development and finding jobs.
"You can't be exposed to this office for
several semesters without learning
about a lot of the [job] options out
there," said Alberta. Butler echoed this
sentiment by explaining that peer ad-
visors "know where and how to start
and follow through in looking for
careers."
Peer advisors clearly have a head start
on finding their chosen careers. More
importantly, they are using their skills
to help relieve some of their fellow stu-
dents' "pains" in getting jobs so that in
the end, more Cornellians will have
that same head start.
A Step in the Right Direction

A SUBTLE STRAIN OF PREJUDICE runs through the Cornell community that most people do not even realize exists. Racial jokes and stereotypes are abundant at Cornell, and social segregation, although discouraged vehemently by the University, remains the standard. The situation has remained stable for some time, but only recently have steps been taken, by both the administration and the student body, to break down the barriers between the races in the Cornell community.

Joycelet Hart, Associate Vice President for Human Relations at the University, recently described a program for Cornell faculty and staff on understanding and avoiding racism and sexism. Led by the training and development staff of the Office of Human Resources, the program has trained more than eight hundred supervisors since it was started two years ago, and has recently become a part of the University’s six-day training program for new supervisors.

Two actors from the Theatre Outreach Group in the theatre arts department act out a series of skits, each dealing with a different situation involving racism or sexism. Members of the audience are allowed to question the actors, who remain in character, about the reasons for their reactions to the situation portrayed in the skit. The six-hour program has included all of the University’s college deans, including David Call ’54, dean of the College Agriculture and Life Sciences, as well as the administration’s executive staff.

“The whole idea is to develop sensitivity about people’s differences,” said Hart, who claims that the program has been extremely successful in making people aware of their own prejudices. “This program allows people to acquire the tools to manage the work force of the future,” said Hart, indicating that minorities are entering the job market now more than ever. “We are trying to educate a community,” she said, “and hopefully we can make Cornell a model for other institutions.”

The administration is taking important steps to eradicate prejudice at Cornell, but students have decided to take steps too. Two fraternities at Cornell, one from the Black Greek Council and one from the Interfraternity Council (IFC), have made an attempt to promote social integration in the student body. Members of Alpha Phi Alpha (Black Greek Council) and Delta Chi (IFC) practiced together two to three times a week in preparation for a charity event called “Shake Your Thang: A Step for Charity.”

The event, which took place on November 18, 1988, centered on a dance routine called a “step show,” described by Alpha Phi Alpha member Anthony Dinkins ’89 as “rhythmic synchronized drills, like an ROTC drill to a faster beat.” The show consisted of a series of choreographed dance steps, singing, rhythmic clapping and a lot of foot stomping to keep the beat. “We use our hands, feet and voices instead of instruments,” said Delta Chi member James Gersten age ’81, “it’s really precise.”

The step show was previously performed in November, 1987, by the Alpha Phi Alpha brothers, but the idea of collaboration between the two houses was conceived in early 1988 by Justin Milberg ’89 of Delta Chi and Monte Ivey ’89 of Alpha Phi Alpha. “We can have fun with a purpose,” said Ivey, “to bring about greater awareness about black and white students and how they can transcend their differences.”

Proceeds of the show, gained from ticket and T-shirt sales and sponsors from other fraternities and sororities, benefited two charities in the Ithaca area. Half went to the Paul Schreurs Memorial Fund, a scholarship offered by the Ithaca Youth Bureau to provide monies, counseling and educational support to a disadvantaged youth in the Ithaca area. The other half of the proceeds benefited the Alpha Phi Alpha College Tour Program, which sponsors Ithaca High School students to tour colleges, to encourage them to strive for academic excellence and to give them a taste for college life.

Both fraternities were founded at Cornell; Delta Chi in 1890 as a law fraternity, and Alpha Phi Alpha in 1909 as the first Greek organization for blacks. Ivey stressed that the leadership spirit of both fraternities was exemplified by this event, and said he hoped that good relations and future events would continue between the Black Greek Council and the IFC.

Rob Roeser ’89, Philanthropy Chairman for Delta Chi, accentuated the fact that although the event is primarily for fun, it will have greater long-term consequences on campus. “I have a good feeling about this event,” said Roeser. “As the name implies, the event is a step for charity;” he said, “but I think we can also say it’s a step in the right direction for relations between the races here at Cornell.”

by Patrick O’Connor ’90

Monte Ivey ’89 (right) of Alpha Phi Alpha and Justin Milberg ’89 of Delta Chi practice their dance routine for their step show.
WHAT CORNELL ORGANIZATION HAS been around for 84 years? Its earliest achievement records date back to 1928, and in 1947-1948 it had 8,078 participants. Twenty years later in 1967-1968 it had more than doubled with 16,654 participants. A high in all-time participation records was set in 1987-1988 with 40,396 participants. This continually expanding Cornell organization is none other than the university's intramural sports program.

Cornell's intramural program is tied to the "sports for the many, rather than for the few" premise of its first president Andrew D. White. Today the intramural program at Cornell offers non-varsity athletes the opportunity to compete against other campus teams in 23 sports. Teams were originally designated only for men, but in 1974 sports divisions were added for women and co-ed teams.

How does Cornell's intramural program stack up to other sports programs in universities of its caliber? Co-director of the intramural program Maria West said, "It's one of the best in the country, and it's probably the best in the Ivy League." West said she's confident in her declaration after comparing programs of other universities at a 1984 Ivy League conference for intramural and physical education directors, hosted at Cornell.

West said since the conference she's received requests from intramural officials at Yale for advice in remodeling their intramural program. She recalled one instance when the intramural director from Columbia University called to get participation statistics on Cornell's program. She said the Columbia director expressed his astonishment at such large numbers and proceeded to momentarily excuse himself. She said he didn't cover the phone very well because after repeating the numbers to another person she could hear him yell, "Well, what else do they have to do up there anyway in the sticks?"

West said the intramural program is a program for the students and by the students. She said once the sports schedules are made up, the obligations of players and officials belong to the students. Each participating team selects an athletic manager, who holds authority concerning his or her team's action and participation record. The athletic managers form a board of students who hold voting power to change rules of the intramural program if so desired by the majority.

The intramural program is run by a staff of ten student supervisors. Supervisor responsibilities include the coordinating of teams to fields, issuing equipment, assigning officials to games and insuring general rules of fair play. For the 1988-1989 intramural sports year, four of the ten supervisors are students in the College of Agriculture and Life Sciences. West said some of the past intramural supervisors have gone on to do a variety of things. Supervisors from the past range from a Playboy centerfold, to priests, to surgeons, to sports administrators, to lawyers and New York City models.

Although the intramural program is run by the students and is participated in by the students, some organization-
al rules must be upheld. West said every year there are students who want the intramural program to offer new sports. Although this is the first year intramurals will offer cycling as a team contest, the addition of other sports usually has to be controlled. West said, "Some students at one time or another wanted car racing in the parking lots, spaghetti eating contests and the revival of intramural boxing. And, when streaking was in, they even wanted streaking."

West said another restriction that is enforced adamantly is the non-acceptance by the intramural program of late registration from any team. West said if teams miss a registration deadline, they miss a registration deadline. Despite protests of many athletic managers to this rule, she said, "With over 2,000 teams participating, you have to live by the rules. There's no such thing as an exception." West believes this policy tends to make the program more competitive. She said some teams live for their rival teams to miss deadlines.

Participating teams in all divisions of intramurals, which include fraternity, independent, dormitory, graduate, women and co-ed, all compete for divisional titles of All Sports Champions. The rivalry for the All Sports championship can be traced back to 1928 when Delta Chi won the first fraternity title. Today teams receive points based on their participation in certain events and their placement standings at the end of the season. At the end of the intramural year, the team in each division with the leading number of points wins the title and trophy of All Sports Champions.

West said the intramural program used to be strict in enforcing that winners of All Sports titles dress formally for their intramural handbook picture. She said the interpretation of this rule got misconstrued a few years back. The winners of that year's fraternity All Sports title wanted to wear athletic clothes for their picture. After hours of argument West laid down the law and said, "I don't care what you wear as long as you have on a suit jacket and tie." She said, "Well, they didn't follow my instructions. In the picture they all wore suit jackets, and ties and ... jock straps. I learned my lesson."

Cornell's intramural program is under the supervision of the Department of Athletics and Physical Education. Although the intramural program has a budget of $72,000, registration fees are still charged to teams entering each sport. West said intramurals calculates a $2 cost for every person playing on a team in every sport. With over 40,000 people participating, the program's budget gets used up quickly. This makes registration fees a necessity.

West said one of the biggest problems facing intramurals is a lack of officials. Although the program expands yearly, the number of people interested in officiating seems to decline. She said paying even a small amount of officials for this year's spring sports may be especially difficult due to the increase in the university's minimum wage.

Participation in the intramural program by undergraduate and graduate members of the ag college is positive. The ag college has been represented by teams from the agricultural economics, agronomy, communications, food science, natural resources and nutrition departments.

This year there is a special call for ag graduate teams and all other graduate teams to top the All Sports championship record of the Johnson Graduate School of Management. JGSM totaled 233 points for the 1987-1988 intramural sports year for all divisions. No other team in any of the divisions, and at any time in the history of Cornell's intramural program has ever scored as high.

Today more than ever, intramurals at Cornell are "sports for the many, rather than for the few." •

by Terese M. Angelastro '90
Reflections on Vienna

"EINS, ZWEI, DREI, EINS, ZWEI, DREI," counted my partner as we waltzed beneath the crystal chandeliers at Vienna's Katarina Ball in the Hofburg Palace. Although elegantly attired couples glided effortlessly around me, my attempts at waltzing were comically less successful. The crowded fraternity parties where I had previously practiced my dancing skills had left me grossly unprepared for this extravagant event.

In fact, very little at Cornell could have prepared me for my year-long study in Vienna, Austria. However, one of the most exciting aspects of foreign study is the flummoxing and intriguing process of discovering a new city and its people, and in turn, oneself.

My experiences in Vienna have given me new perspectives on myself that I never could have otherwise attained. After all, without stepping back and away from the mirror, one can never hope to see one's entire reflection.

For one year, I stepped back away from Cornell and back in time to the traditional, nostalgic, relaxed life of the Viennese. There is probably no spot where time stands still as much as in a quaint, smoke-filled Viennese cafe. Overflowing with magazines and international newspapers provided by the establishment, customers may sit on the velvet couches at the marble tables for as long as they desire.

I eagerly indulged in this traditional pastime as it was a delightful change from the fast-paced life I was accustomed to. During long hours spent flipping through the International Herald Tribune or writing observations in my travel diary, I candidly observed an entire society.

Accustomed to Cornell's busy student life and social scene, I welcomed this solitude and anonymity. Without the familiar distractions of making idle chatter and small talk, my senses became keenly attuned to the stimuli surrounding me in Vienna. The aromas of wonderfully rich coffee, the sweet scents of freshly baked apple strudel, the clinking of horses' hooves on the ancient cobblestoned street and the clinking of wine glasses in the wine cellars, all held an increased fascination for me.

I was able to enjoy many elements of life which I had previously neglected. Swept up in the wave of Viennese cultural life, I attended operas, symphonies, theater performances, museums, gallery openings and exhibits. My thirst for expanding my experiences was insatiable.

Being in a foreign environment also inclines one to try foreign things. I donned hiking boots and tackled one of Austria's many huge mountains, I cooked foods I could not pronounce the names of. I learned how to windsurf in Yugoslavia and I learned how to waltz (well, almost.)

I also challenged myself outside the academic curriculum of my program. I tutored a Turkish businessman in English. I designed a city walking tour for my business internship and I learned how to speak German, or rather, "Viennese."

Living in Vienna taught me to do without such luxuries as 24-hour supermarkets, ice cubes, stand-up showerers and even washing machines. (To avoid the $15 per load charge, I jumped on my clothing in the bathtub for a year.)

I amazed myself at how quickly I learned to adjust to strange, and often unpleasant, situations. Sailing with Austrian friends around the Yugoslavian islands for a chilly spring break, I learned the hard way what it is like to be cold, wet, short of sleep and unshowered for a week. An earlier excursion to Portugal had turned into a 72-hour nightmarish blur of cold trains, filthy stations, and as always, lack of sleep. However, it was not until I visited Moscow that I proudly realized how versatile and flexible I had become.

Despite the inconveniences, living in Vienna and traveling through foreign countries was the most fascinating and self-enlightening experience of my life. I now have friends in many different countries and my interests no longer focus merely on the United States.

While my career goals had previously been directed toward one particular U.S. city, I am now no longer sure of which country I wish to work in. It was not until I stepped out of my shell for a while that I realized what a narrow path I had carved for myself and my future. After all, the quest for adventure lies within all of us, but many of us are just too close to the mirror to notice.

Editor's Note: Lauren is a communications major in the College of Agriculture and Life Sciences. She spent her fall '87 and spring '88 terms studying at the Institute for European Studies in Vienna, Austria.

Riders in a horse-drawn carriage, called a "fiacre," get a view of the Vienna Opera House.
Barazangi Wins Glock Award

The 1988 Glock Award for Research in Human Learning, established by the Department of Education, was received by Nimat Hafez Barazangi. Barazangi, who received $350 in cash, won the award for her PhD dissertation titled, "Perceptions of the Islamic Belief System: The Muslims of North America." The award was established to honor the contributions of Professor Emeritus Marvin P. Glock for teaching and research in human learning by the Department of Education and the New York State College of Agriculture and Life Sciences.

Nutritional Lectures Presented

The Division of Nutritional Sciences presented a series of lectures this fall on government policies and how they affect nutrition. The lecture series was supported by a grant from the Pew Memorial Trust of Philadelphia.

The lectures, presented in Martha Van Rensselaer Hall on selected Tuesdays over a three month period, included:


"Nutrition and Incomes: Tightly Wedded or Loosely Meshed", Jerel Behman, professor of economics, University of Pennsylvania.

Agriculture Market Liberalization and Its Implications for Nutrition in Malawi," Daniel Sisler, professor of agricultural economics, Cornell University.


"Food Price Stability and Welfare of the Poor," Peter Timmer, economist and professor at large, Harvard University.

Food Venture Center Opens

The New York State Food Venture Center officially opened on September 9, at the New York State Agricultural Experiment Station at Geneva. The purpose of the Center is to provide aid to entrepreneurs in the development and promotion of new food products. The idea for the Center is a result of the recommendations made in last year’s plan “A Strategic Plan for the Fruit and Vegetable Industry in New York State.” This plan was compiled by numerous industrialists, agriculturalists, educators and others. Dr. Donald L. Downing, who will manage the new facility, provided the public with information about the Center.

The expertise offered by the Center will cover topics such as guidance in ingredients, health standards, methods for preserving processed food and regulatory matters. The kinds of food proposed include: salads, blended fruit juices, dressings, sauces.

Funding for the Center comes from Cornell University and the New York State Division of Agriculture and Markets, which approved a development program grant of $48,000 in late August.

Todd W. Gusek has received one of two awards presented for excellence in graduate research in agricultural or food chemistry by the American Chemical Society. A graduate student in the Department of Food Science, Gusek was given the award for his discovery of a potent enzyme that can make laundry detergents more powerful stain removers. He presented his research results at the national meeting held in Los Angeles in September.

The Director of Cornell Plantations for the past five years, Robert E. Cook, will leave that post in early 1989 to become Director of the Arnold Arboretum at Harvard University. He is an associate professor in the Section of Ecology and Systematics in the Division of Biological Sciences as well as the Elizabeth Newman Wilds Director of Cornell Plantations. During his tenure the Plantations tripled its operating budget to $2,200,000 and undertook extensive renovations of the plant collections, including the development of the F. R. Newman Arboretum.

Plantations also coordinated the $1 million restoration of Beebe Lake and the repair of the Cascadilla Gorge trails, with the support of alumni and friends. Dean David L. Call of the College, which administers Cornell Plantations, said, "His achievements have greatly improved one of the most cherished educational and public service institutions at the University."
“Even if Cornell is very visible in the state, people don’t necessarily know about the variety of possibilities in the seven different colleges,” said Nancy Rehkugler, Associate Coordinator of Admissions. Rehkugler is one of the four admissions officers involved in the recruiting process.

The broad range of recruitment activities for the College of Agriculture and Life Sciences is arranged and carried out by the admissions office staff when they are not involved in the selection process. The recruitment of prospective high school and transfer students takes place primarily between September and November of each year.

“We have a number of recruitment activities which we do half of the year, and in the other half we do selection,” said Rehkugler.

“The recruitment activities can be divided into three categories including: off-campus activities, on-campus activities and mailings,” she continued.

On-campus activities, Rehkugler said, include such things as admissions conferences for campus visitors. Open House, Transfer Day, guidance counselor conferences and a hosting program for accepted students. Open House and Transfer Day have proven to be successful, as well as the hosting program, “Cornell Days”, which has steadily become more popular. The hosting program allows accepted freshmen to attend class, stay overnight and meet students and faculty in their areas of study.

Off-campus recruiting activities include college fairs, high school visits, alumni programs and events like Empire Farm Days, the state fair and national Future Farmers of America conferences. “We have an admissions booth at the state fair,” said Rehkugler. “There is a video tape that runs and somebody is usually there to answer any questions or to hand out material.”

Another on-campus recruiting activity is the student ambassador program, advised by Susan Miller. Rehkugler said student ambassador activities include: hosting prospective students who visit Cornell, speaking at group conferences and alumni functions and taking material home to their high schools when they return for holidays.

Students make it seem more real and appealing to prospective students, said Rehkugler, because they represent what it is like to attend Cornell. For this reason, she said recruiters prefer to take students to recruiting functions whenever possible.

“We have a very active Alumni Association here,” said Rehkugler. They help at Open Houses and tend to influence specific regions in the recruitment of students.

Mailings to prospective students are the last category of recruitment activity mentioned by Rehkugler. “I did a student search nationwide,” she said. We used the ACT test to search for students interested in the area of agriculture. Those students who were interested in this area were evaluated according to certain criteria (test scores or high school averages), and the selected names were purchased (there were over 3,000). Each of these students will receive a letter and a copy of the new Ag college catalog.

“Faculty members are also actively involved in the recruitment area,” said Rehkugler. “Many times people will go directly to a department instead of coming here.” The faculty member can be very specific and helpful about the particular program.

Individuals involved in the admissions function visit delegated regions of the country and represent all of the colleges at Cornell, said Rehkugler. “It is really a Cornell University goal to increase our visibility nationwide. Not everybody, everywhere has heard of Cornell.”

She continued by stressing that public relations is important in getting to know counselors at specific schools and colleges. “We have a very strong relationship with the two-year colleges in New York state for transfer students.”

What are recruiters looking for in prospective students? Rehkugler said the major attributes which are considered in the selection process include academic preparation, achievements, activities and appropriateness of interest. “We think a lot about the appropriateness of their interest for the college programs,” she said.

The biggest challenge to recruiters, said Rehkugler, is to broaden the traditionally narrow view of agriculture to encompass such things as distribution, advertising, marketing and engineering.

“Too often people think of agriculture as strictly production,” she said, “and students may not consider Cornell because of that narrow view. We are working to change that view.”
Naturally Cornell
About the Issue

How does our environment affect us, and how can we affect it? Everyone shares concerns about success, health and education, and in this issue we examine how we make observations and utilize them to shape our environment. We hope to provide insight by providing a better understanding of AIDS and its impact on us, what farmers can do with their farms while they vacation, and how a group of undergraduate students launched their own entrepreneurial adventure.
SHARING EXPERTISE

"THE FACULTY IN THE COLLEGE OF Agriculture and Life Sciences is at the forefront of research in many of the issues facing society today," said Associate Director for Academic Programs, Dr. Elizabeth Oltenacu. "The Contemporary Issues program we have designed will allow students the opportunity to objectively discuss these current issues with the recognized experts in the field.

"The Contemporary Issues Seminars will focus on various topics which are current issues. As the issues change, the courses offered will change as well. Faculty members can pick any topic that is a current issue in their field of specialty. This involvement will not be a big chunk of work for them; they don't need as much preparation as they would teaching a big introductory course because they should already be familiar with their topic.

"In many cases, more than one faculty member may be involved with a particular course since there are many large issues to address, and different sides to present. We are encouraging cooperation with other faculty, especially across colleges," said Oltenacu.

The courses will be offered for one to two credits, and open only to juniors and seniors. Areas in which issues are likely to be discussed include: the environment; international competition; the application of biotechnology; the Pacific Rim; ethics in agriculture; the media; and world demography. "We want to put an emphasis on writing as well as reading and discussion because we have received feedback from students who want more writing in their courses, such as they do in freshman seminars.

"The primary idea is that we have really top professors in the classroom, and we want to increase the opportunity for students to interact with them. We would like to offer enough courses so that each junior and senior can take at least one, and have the chance to put together what they have learned in other classes," said Oltenacu.

Some contemporary issues courses have already been offered, but primarily in other colleges at the University. The College of Human Ecology offered a course called AIDS and Society in the fall of 1988. "The emphasis there was on the class interaction with the Ithaca community," said Carol Pouchie '89, who took the course. "We did a lot of reading, but no writing. Rather, we worked on a huge project, in which we wanted to educate the community. We held a day-long AIDS orientation called Foreplay, in which we addressed different AIDS-related issues," Pouchie said.

The ag college, however, is starting to initiate contemporary issues courses as well. The Department of Agricultural Economics offered a course called Global Competitive Strategies in the fall of 1988. This course is a good example of a typical contemporary issues course. It was a one credit seminar offered by three professors: Associate Professor Gene German of the agricultural economics department; Associate Professor John Abowd of the School of Industrial and Labor Relations; and Associate Professor Thomas Kelly of the School of Hotel Administration.

"The idea of the class was to examine how corporations deal with global markets and outside competition," said Mary Ellen Fogarty '89. "We applied general theories that we learned to the Eastman Kodak Corporation and discussed how we thought Kodak would handle certain situations. Then at our final meeting, we had a special guest tell us how Kodak actually did handle these situations. Kodak's Chief Executive Officer Colby Chandler answered all of our questions," Fogarty said.

Global Competitive Strategies did what a contemporary issues course should accomplish: it got students to interact with faculty, as well as to interact with important members of the business community. Future contemporary issues courses will further be able to do this as they will receive special support from the President's Fund for Educational Initiatives.

"The President's Fund has traditionally given support to things that will add to undergraduate education," said Oltenacu. The ag college has been given $2500 per contemporary issue course that is initiated. "We are not going to ask the faculty how the money is spent. It will go into a department account, and can be used at the faculty member's discretion. Some will use the money for research to present in the classroom, while others may use it for photo copying handouts and other things which are needed to teach," said Oltenacu.

"This idea has gotten people to think. We have engaged quite a few people's imagination, and hope to have some of these courses for the spring of 1989. However, there is no immediate deadline. The money will be offered for a few years, so the faculty can have time to get together and come up with some interesting ideas," said Oltenacu.

by Izabella Rudzki '89
A DRY SUMMER

"TO UNDERSTAND WHAT HAPPENED in the northeast during the summer months, one has to look at what was happening in the Pacific northwest during the winter of 1987. One has to understand the complete scenario," said David Masonis, an extension agent in the College of Agriculture and Life Sciences. A severe drought had made its way across the country and affected agriculture in the Pacific northwest, the midwest and the northeast. Many people suffered through the drought of 1987 and wondered if it signalled a major change in the climate.

Masonis explained that as early as fall 1987 meteorologists and other interested observers were aware that the Pacific northwest was experiencing abnormally dry conditions. "People knew how much it was supposed to snow and rain during that period," Masonis said. "There was concern about dryness during the spring and summer as winter rainfall was well below normal." By looking at the movement of the dryness across the country and over several months, researchers can see the effects the climatic change has on agriculture, both economically and socially.


Eggleston explained, "One of the interesting things about the drought, was that the pattern of dryness increased as one went south." Parts of New York received anywhere from 30 to 90 percent of normal precipitation, while areas in West Virginia and Maryland received no more than 30 percent of normal precipitation for the period between May 29 and July 9, 1988, the most severe period of the summer’s dryness.

The geography of the drought was not the only thing that affected crops during the summer. The time frame was also critical, according to Masonis and Bill Cox, an assistant professor in the Department of Agronomy. "Crops that were planted last winter, wheat and barley, did very well because the seeds and plants had time to develop before the situation got critical toward the end of May," Masonis said.

"Most farmers harvested high yields of hay after the first cutting which occurred in mid-June. Because the weather was so dry around that period, the hay didn’t grow and farmers had poor yields with the second cutting," he said.

Cox said, "The timing was critical. If one goes back to May and looks at the heavy rains that occurred in the middle part of the month and then the dryness that occurred over the next seven-week period, one can see how two forces doomed certain crops from the start, particularly grain corn."

Cox explained that the heavy rains in mid-May had prevented emergence or washed away recently emerged corn plants in poorly drained fields. "It was a case of being too wet when the corn plants were trying to emerge from the soil. Farmers who planted on poorly-drained fields lost approximately ten percent of the crop they had planted," Cox said. "During the next seven-week period, the dry conditions greatly reduced the height of the corn crop and reduced grain yields by 20 percent. Fortunately, the rains came in mid-July and prevented further losses."

The crops least affected by the drought were winter wheat and barley. In fact, many farmers reported record high yields of these two crops. Ray Aasen ’56, a farmer in Lansing, New York, said, "The 50 acres of wheat and 30 acres of barley we harvested this August were great. They were our bumper crops this year."

Crops moderately affected by the dryness included grain corn, apples, grapes and other vegetables. In some cases farmers had yields of 60 to 80 percent of annual harvests. "We managed to harvest about 50 percent of the grain corn we planted," Aasen said. "That will probably just be enough to feed the dairy cattle this winter," he commented.

"Oats, planted in the late spring, bore the brunt of the drought. Oat crops yielded only 40 to 50 percent of average yields," Cox said.

Cox explained that although the drought had moderately affected the crops in New York state, his main concern was how the drought affected the feed crops grown in the midwest. "Those crops that were destroyed in the midwest are critical to dairy farmers in New York state," he said. "For the past two years it has been cheaper for our dairy farmers to buy feed, soybeans and grain corn from midwestern farmers. During the drought, they watched the price of these crops double within a month," he said. Masonis commented, "In March, soybean futures were selling for about $5 a bushel. By mid-July, they were selling for more than $10 a bushel."

Feed represents about thirty percent of all input costs to the dairy farmer. With rising feed costs, it becomes increasingly expensive to produce milk for commercial and retail sale. Unlike prices of most other products manufactured by companies in the United States, the price of milk is regulated by the federal government. Because it is such a widely used product, farmers are required to price milk according to guidelines set forth by the U.S. Department of Agriculture (USDA). Therefore, farmers cannot raise the price of milk to account for increased production costs. "Farmers are going to have to take some
major losses this year because of what they had to pay for their feed and what they are being paid for their milk,” Cox said.

Some farms were affected more than others by the drought. Although cases of smaller farms going out of business were reported after the drought and although the drought touched almost every aspect of agribusiness, USDA economists are confident that the national farm debt will be reduced slightly this year. Mick Lane, a writer for Soybean Digest, reported “The drought will definitely forestall the economic recovery that was developing in the farm sector. By the end of 1987, farm debt had dropped to $142.7 billion, down twenty-six percent from the peak of $192.7 billion, reached in 1983. Even with the drought, USDA economists are projecting a four percent reduction in farm debt at the end of 1988.”

Researchers agree that it is impossible to predict whether or not 1989 will be as dry as 1988. Citing the uncertainty of weather and the difficulty of long-term forecasting, researchers are extremely concerned about the causes of such volatile and abnormal climatic changes. Some meteorologists refer to the gradual heating of the earth’s atmosphere as one possible explanation for drastic changes in the global climate.

Duane Chapman, a resource economist in the ag college’s Department of Agricultural Economics, explained how the earth’s average temperature has increased from 58 to 59 degrees Fahrenheit since 1960. “To understand the implications of this rise in the average global temperature, scientists have been looking at mean temperatures and how annual standard deviations relate to that mean,” Chapman’s theory suggests that, as the slope of the line drawn after plotting average global temperatures (T) against a certain period of time (t) increases slowly, the deviations from that line increase sporadically.

To illustrate this theory, one may consider an average global temperature of about 58 degrees Fahrenheit in 1930. Deviations from the mean temperature may have been as little as ten degrees below or ten degrees above the average temperature in some areas. In 1988, the global temperature was approximately 59 degrees Fahrenheit. If one considers the theory mentioned previously, deviations would now be as dramatic as twenty degrees below or twenty degrees above the average temperature in places.

Chapman sees three main causes for the increase in average global temperature. He cites fuel burning, deforestation and an increase in the number of chlorofluorocarbons, chemicals that break down the earth’s protective ozone layer, in the atmosphere as the prime contributors to the increase. “The United States contributes one-third of all carbon dioxide to the atmosphere because of fuel burning,” Chapman said.

“If we continue to consume fossil fuels, as well as lose valuable forests, then the temperature can only go up. If other countries begin to affect the environment as much as the United States has, we could see a sharper increase in the average global temperature over the next fifty years,” he said. “When that happens, it’s anybody’s guess as to what will happen to deviations in temperature and global climate.”

Masonis said, “It is impossible to predict what will happen exactly. There are too many variables and interactions in the atmosphere that we still do not fully understand. We can’t forecast accurately long-term climate changes at this time.” Temperatures and weather patterns have been recorded only for the past one hundred and thirty years. That is an infinitesimal amount of time when compared to the age of the earth. Without knowing what happened before data were collected, scientists find it that much harder to make substantive and conclusive comparisons between years.

For now, however, farmers and researchers are just hoping 1989 will not be a repeat of the dryness they experienced in 1988. “It was an unusual experience,” commented Aasen about the 1988 drought. “I just hope next year is a little wetter.”
NYCafe: LA Style

WHAT DO YOU DO IF YOU ARE 2000 miles from home and you realize that it is virtually impossible to find frozen yogurt in Ithaca? If you are hard-working and determined like Matthew A. Baizer, you market the idea and open up a contemporary cafe in Collegetown on the corner of Dryden and College Avenue.

In fall 1987, Baizer, a sophomore in the School of Hotel Administration, came up with the idea which he proposed to three students enrolled in Enterprise and Entrepreneurship, a class in the Johnson Graduate School of Management. They then developed a business plan for Baizer as a class project. In exchange for the plans he and his business partner, Andrew W. Burton, a friend from his home town Los Angeles, agreed to pay the group one percent of the first year's profits.

"The inspiration for NYCafe was to create a market for Los Angeles foods which Collegetown didn't previously have, namely frozen yogurt," Baizer said.

Although the idea is based on cafes in Los Angeles, he opted to name it the NYCafe because most Cornell students are from the east coast. "We thought the cafe would be accepted better if it were named after an east coast city as opposed to one on the west coast. Besides LACafe doesn't sound as nice."

Baizer and Burton discussed their business plan with four Los Angeles entrepreneurs and two agreed to invest in their venture. Construction began during the summer and NYCafe opened for business on the evening of September 16, 1988. Baizer and Burton work full-time and have hired 17 part-time employees to keep the cafe staffed seven days a week.

It has been well received by most of its business neighbors, with the exception of a couple of older establishments in Collegetown. Baizer attributed their hostility to feeling threatened by the image of competition and not the competition itself. "If you see a sign for a new food establishment go up, you can't help feeling a little threatened if you own a restaurant too," Baizer said.

A few other establishments have seemingly "jumped on the bandwagon" and are also selling frozen yogurt. Baizer believed that this kind of competition is good for business. "The more places that sell frozen yogurt, the faster the concept will spread throughout the community. I feel that our product is superior to any other available in Ithaca and that eventually everyone will realize that."

The quality of NYCafe's frozen yogurt is indisputably good. "I think it is great," Jodi Rosen '89 said. "The flavors available from Columbo are delicious, especially cheesecake yogurt."

Indeed, the Collegetown community seems to have taken a liking to the newest venture on the block. Baizer said business has been better than originally expected. "The first two weeks were tremendous. Columbo Frozen Yogurt projected that we would go through three cases a day and we averaged ten in the first week. The cool weather has tamed sales a little but we still average seven cases a day."

The two young entrepreneurs have launched other plans to boost sales during the winter months. They have added hot menu items such as soup and now sell deli meats and cheeses by the pound. In addition, they have expanded their hours on the weekends.

"The afterhour crowd is an important market in Collegetown. Students always like to eat, especially late at night after the libraries and bars close," Baizer explained.

Rebecca Lorriss '91 agreed. "Most places in Collegetown stop serving food at midnight. The NYCafe is a great place to unwind after a night of studying or partying."

Baizer and Burton's most recent endeavor has been the expansion of the NYCafe. It is now complete, with a newly constructed bar, Burton's, in its basement. The cafe was closed over winter break to allow construction of the bar.

What does the future hold for these two California businessmen? Eventually Baizer and Burton plan to expand their business into other college towns along the east coast. "There is definitely a market for such ventures in the eastern United States. But for now we are just taking it day by day."

by Deborah H. Lippert '89
Edible Flowers

FLOWERS. SOME EMIT AROMATIC fragrances and others blossom with wondrous and aesthetically pleasing colors. But did you know some flowers are actually good to eat? Well, it's true. Edible flowers have become one of our nation's hottest culinary trends.

Granted this is nothing new. Evidence of people eating flowers dates back to Imperial Rome. According to an article in the August 1988 edition of The Culinarian, recipes for making rose and violet wine appear in a cookbook written in the eighth century A.D.

Also included in the article are references to colonial American recipes such as "flowerwater for flavoring cakes" and "fresh posies for dressing up special salads."

Today, the use of flowers in cooking seems to be making a comeback. "During the past five years, this trend has erupted into the fine dining establishments everywhere," said Chef Robert White, Chef Instructor at the Cornell School of Hotel Administration.

Mike Ludgate '80, general manager of Ludgate Produce Farms recalls noticing this flower fad and deciding to capitalize on it. "Five years ago it didn't even occur to us to sell edible flowers. But now, based on customer demand, I try to keep a steady supply on hand," he said.

Ludgate mainly focuses on the wholesale end of the edible flower business, although he does make his stock available to any interested party. While some of his supply is grown on premises, he also receives floral delicacies from all over the world.

Various restaurants these days feature flowers as regular menu items. Often they are used as garnish, but sometimes as a side dish on their own, like battered tempura squash flowers. White also spoke of salads using nasturtiums and rose petal ice cream. He said that flowers not only accent a dish in taste, but also in appearance. "I think they're (flowers) great," he said. "They really do lend a great dimension to a plate's presentation."

Gardner pointed out the varying degree of toxicity from one type of flower to another. She said that U.S. statistics show very few accidental deaths caused by the consumption of poisonous plants and flowers. "I personally have never read about a death from eating poisonous flowers, but it probably has happened," she said. Although she has heard of people who have overindulged themselves with too many edible flowers and consequently gotten upset bellies.

It seems that there is no obvious way for the common person to tell a poisonous flower from an edible one. There is too much variety in species. For instance, Gardner pointed out that flowers from the mint and rose families are edible while the blossoms from the pea family (Lathyrus species) are not. "It can be difficult to determine," she said.

Flowers that are by nature edible can become noxious, such as roadside wild flowers and flowers exposed to herbicides or pesticides. "We specifically don't use pesticides on our edible blossoms," said Ludgate. "It might leave a dangerous residue." Chef White also stressed that restaurants only use organic flowers, meaning they are free of chemical treatment.

Books can aid a person in determining which varieties of flowers are edible and which should be avoided. On a list given to interested visitors, Cornell Plantations cites two helpful publications: A Field Guide to Edible Wild Plants, by L.E. Peterson and Flower Cookery, by Mary MacNicol.

Like a lot of things in this world, edible flowers can be deceptive. With a little caution, flowers can add life to both the flavor and appearance of a dish. "Flowers are fun to decorate with and add something special to dishes," said Gardner. Let's face it, American palates are constantly searching for new ways to liven up their food. For the time being, flowers seem to be doing just that.

by David Oliver Holcomb '89
STRESS. THE WORD HISSES LIKE A snake; a snake that slithers up behind you and strangles you if you’re not prepared to handle it. Stress comes in different shapes, sizes and forms but there is always one common underlying factor: nobody wants it.

Stress is a common fact of life and in small doses is healthy. It can be a motivating force for academic achievement and a driving force for personal accomplishment. However, too much stress can disturb us physiologically as well as emotionally. Short term stressors such as giving a speech make our hands sweat, our heartbeats rise and our voices shake. But long term stressors can take a serious toll on our bodies resulting in acne, chronic headaches, insomnia and ulcers.

We face many stressful events during our lives and going away to college is one of them. Once in school the stressors seem to multiply: a 15-page paper due in a week, a lab report due Tuesday, a job interview Wednesday, an oral presentation Thursday, a blind date Friday, a car that won’t start and five weeks worth of dirty laundry piled in the middle of the room.

The “stress buster” student would make a plan of how to tackle everything while the clothes are in the spin cycle, and outline the report while the clothes are in the dryer. However, many students would rather hurdle the laundry pile each time they walk through the room, plop down in front of the television with a bag of potato chips and complain that they have “too much to do and are stressing.”

Unfortunately, not all stressful situations can be conquered as easily as a term paper. A death of a close relative or friend, a divorce at home or a financial setback, are all situations that must be “dealt with” rather than eliminated. Dealing with stress or just merely reducing it is easier said than done and everyone has their own method of doing so.

“As far as I’m concerned, there’s no better way to relieve stress than physical exertion,” said Joanne Troisch ’89, an agricultural economics major in the College of Agriculture and Life Sciences. “I try to run every day, especially if I’m stressed about something.”

Many students favor this method of stress reduction, indulging in an activity that occupies their minds with other thoughts to clear their heads. Whether it is exercising, playing piano, painting a picture or watching a movie, a temporary escape provides a psychological respite from the daily stress of Cornell life.

Not all students are able to remove themselves from the problems that trouble them. “I sometimes feel so totally paralyzed by my stress that I can’t even take steps to reduce it,” said Diane Levitsky ’89. “I don’t rationally think things out point by point—I just freak out!” This feeling is shared by many students although it usually manifests itself into chronic complaining and procrastination rather than constructive action.

However, even those who do not handle stress well often do not take steps to seek help. “People are often too embarrassed to attend a workshop or counseling session,” said Susan Lerner, assistant dean for counseling and training and coordinator of personal growth workshops which include a stress management workshop. “Our culture doesn’t encourage people to admit when they can’t handle stress on their own.” Nicole Page ’90 shares this sentiment precisely. “I guess I would attend a stress management workshop if I thought it would help,” she said. “But I don’t see why I wouldn’t be able to handle things on my own.”

Despite such resistance, Lerner is pleased with the turnout for the stress management workshops which are held in various locations around campus in a series of three sessions, two in the fall and one in the spring. Classes...
are limited to 12 people to maintain close interpersonal contact and must often close people out. Students come from all colleges and schools within Cornell University with freshmen and seniors the most heavily represented.

"Freshmen are dealing with the stress of being away from home and coming to the Cornell community while seniors are dealing with the stress of leaving this community," pointed out Lerner. While people come to the workshops for different reasons, classes try to help each person sort out individual problems.

There is a basic class outline with supplementary handouts and physical relaxation tapes played at the end of each class, but classes are basically fluid. Participants determine the direction of the session depending on what they want to focus on and what their individual problems and needs are. One worksheet handed out helps people identify their sources of stress. "People often don't realize why they are stressed," said Lerner. "But once they break down their thoughts and put them on paper they can better analyze and deal with their problems."

Students enjoy the moral support and objectiveness they receive from other workshop participants. "Very often friends can not or will not be total-ly objective to a situation and that can be very frustrating," Lerner said. The groups also offer a comforting atmosphere for the stressed student who often feels isolated and alone.

Another form of campus counseling is the peer counseling service at EARS, an acronym for Empathy, Assistance and Referral Service, sponsored by the Dean of Students Office, and located in Willard Straight Hall. Unlike the personal growth workshops, EARS counselors are trained to help the student analyze the causes of the stress and figure out how to deal with it accordingly.

EARS is comprised only of student counselors unlike the personal growth workshops which utilize about ten percent students and 90 percent staff. EARS trainees undergo rigorous training before they can qualify to become full counselors. Training lasts one to two semesters and involves frequent and intensive lessons on empathy and learning client-oriented approaches.

After the first semester of "beginning training," "advanced training" follows. Upon completion of "advanced training," trainees must satisfactorily complete a "role-play" of a simulated counseling session before they can become full counselors. Not all trainees go on to become full counselors and many in fact never intended to. Many students go through training solely to learn how to deal with their own stress and to learn important interpersonal skills to help their friends.

EARS sponsors an outreach program to further reach more students. EARS outreach is a series of one-session workshops for dormitories and other campus organizations. Salustri said these workshops are always in high demand around exam time and the most popular workshops are always stress management and time management.

Both the personal growth workshops and EARS have been very favorably received and have helped many students come to terms with their problems and learn how to fight stress better. "Many students upon graduation regret not having ever taken a workshop," remarked Lerner. "The workshops are not just for reducing current stress at Cornell, but for handling stress in the working world as well."
To Understand AIDS

by H.J. MacKay '89

BIOLOGY AND SOCIETY 451 IS taught by a virologist, a lawyer, an epidemiologist, a theatre arts professor, an animal physiologist and a health clinic director, among others. These lecturers' breadth of expertise is indicative of the pervasiveness of AIDS, the deadly disease that is the topic of the course.

Offered for the first time in fall 1988, "AIDS and Society" is a Common Learning Course organized by Ari van Tienhoven, professor emeritus of animal physiology. The curriculum deals with many of the volatile controversies and problems surrounding the AIDS epidemic. The class deals with many questions weighing personal rights against actions which might help stop the spread of AIDS, van Tienhoven said. The disease has brought a resurgence in homophobia, and attempts to label or isolate AIDS carriers.

Meanwhile, many people assume they will not get the disease because they are not members of the groups most widely affected in the United States, intravenous drug users and gay men. "People protect themselves with attitudes that say 'AIDS is not my problem as long as it doesn't affect me,'" said Lisa Almeder '89, a student in the class. "The challenge is teaching people that sexual preference doesn't matter, but risk behavior does."

The syllabus was designed cooperatively by a teaching team, and each discussion is led by a different expert. One of the lecturers, Leslie Elkind, Director of Gannett Health Clinic, talked about problems faced by health care professionals dealing with AIDS patients. van Tienhoven said. A New York law passed this year requires doctors to take action to notify sex partners of AIDS patients. Notifying partners of the patient is not only emotionally difficult, but requires the doctor to break the longstanding ethic of doctor-patient confidentiality. "That puts a doctor in a terrible dilemma," van Tienhoven said.

Seth Speyer '89, a student in the class, noted that doctors have to deal with a double challenge of protecting themselves from the disease, while offering emotional and medical support to a patient who has been given a virtual death sentence.

van Tienhoven's lecture, "Are uncontrolled experiments ethical?", addressed the questions brought by rapid development of possible vaccines and cures. While van Tienhoven does not think AIDS victims should be given untested drugs, he said it is very difficult to deny AIDS patients the chance that the latest discovery might save their lives. Careful drug testing is "very easy to preach," he said, "but it's much harder to practice."

A problem that surfaced in 1988 was whether or not the government should distribute clean hypodermic needles to drug users. "Since the gay population is now very aware of AIDS, the increase is now largely from intravenous drug users," van Tienhoven said. However, van Tienhoven said. However, many Black and Hispanic leaders protested a free needle plan in New York City, calling it genocide and saying it would worsen drug problems.

What shape will the future of AIDS take? "I'm very pessimistic," van Tienhoven said. "Even if they found a cure tomorrow, it takes years to get it tested. It's so difficult. I think within a few years AIDS is going to be the number one cause of death." He also wondered how society will pay for expensive AIDS research and medical care.

The topic of the course is up-to-date and so are the teaching methods. van Tienhoven decided the class would write no papers and take no exams. Instead, he asked the students to organize a public event on AIDS. "I wanted to see how creative they were," he said. "The event is partly informative and partly an expression of how they feel about AIDS and the issues this course has sensitized them to."

The presentation, called "Foreplay— for life," took place in the Memorial Room of the Straight and included information booths on statistics, safe sex and community resources, video tapes, free condoms and an attempt to show people "what it means to have AIDS."

Almeder, a pre-medical student, said she enjoyed the class because it stressed group discussion and working with people, a relieving change from the highly competitive Cornell atmosphere. "It's a learning course, learning about what and how people think. And you learn about yourself," she said. "The most shocking thing we learned was not about AIDS, but about the abundance of views people hold, people's close-mindedness and the clashing of conservative and liberal opinions," Almeder said.

And that is just what van Tienhoven hoped would happen. "The course is only a vehicle, the students must arrive at their own conclusions and, maybe, shed some of their preconceived notions," he said. "Now I'd like the students to channel their knowledge into something constructive, into a concern for humanity."
Trading Games...

by Melissa L. Lanning '89

IT IS THE SPRING SEMESTER AT Cornell, and as usual Warren Hall is buzzing with activity. One of the busiest parts of the building is the area just outside the food marketing office on the second floor. This is the place where students wait anxiously to place trades in the Future Commodities Market game.

"Prior to this class, I did not have any knowledge or understanding of futures commodities," said Anissa Buckley '89. "By actually playing the simulation game I gained an understanding of the fundamentals of the market."

The commodity market game is a learning exercise set up for students in Marketing and Futures and Options Trading as a simulation of the actual Future Commodities Market by the Department of Agricultural Economics. The game is played throughout most of the semester, Monday through Friday. Four price points are posted each day including: opening, morning, afternoon and closing.

Each student receives an account representing $20,000 to begin trading. The six commodities which are traded include: wheat, soybeans, pork bellies, cattle, frozen orange juice and corn. Trades must be made with a buy or sell position. To close the contract, the student must take the opposite position to "cancel out" the previous trade. For example: if a student buys cattle, and later sells it at the price increases, he or she makes a profit. Each student is required to complete a minimum of ten "round turns" (each buy-sell cycle). Students are to act as speculators. In other words, their aim is to close out their contracts before the delivery date, because they have no actual interest in receiving the commodity.

"The future commodity trading game has been used probably for as long as the course has been taught," said Professor Gene German, associate professor of agricultural economics.

This year the traditional trading area on the second floor of Warren Hall will be quiet. German said a computer system has been developed which will allow students to trade at any computer terminal on campus where access can be made to the mainframe. This new system will be used for the spring '89 classes.

"There will be no more turning in trading cards," said German. "Students will actually pull up their account number, access the computer, look at prices and decide if they want to buy or sell." The new system will allow students to see their accounts, how much money they have, and what recent trading has done to their accounts.

What do students learn from the game? "From the standpoint of marketing, it is really the best example of pure supply and demand at work," answered German. "Although it's not always a true reflection of what is happening with supply and demand, it's what people think is happening with supply and demand."

"I definitely learned more than if Professor German had just described the process," said Jeanne Carlson '89. "I learned it isn't as easy as it looks to come out with a profit in the end."

"I would say two-thirds of the students really get caught up in the trading," said German. "They find it fun...especially in a year like last year, with the drought and with a big change in price."

"Some of the commodities like soybeans hit all-time record highs," he continued. "People were either making a lot of money or losing a lot of money and it creates a lot of excitement."

German said some students have actually gone out and played the game or become traders in the actual future commodities market. "I have several students who got so excited about this, that they got summer jobs and some are now actively trading as a career," he said. "I get phone calls, notes and messages from students frequently who are trading or members of the Chicago Board of Trade."

German said other colleges and universities use similar learning exercises, but Cornell was the first. "The people who are interested and other schools that are interested can copy our computer system. Now that we have a better program, I'm sure we'll be sharing that with other schools in the near future."

When asked how students were graded, German responded, "We grade them on participation, not on money won or lost. So a student—even if they lose all of their money—could get just as good a grade as someone who earns $20,000 or $30,000."

Each semester, awards for the trading exercises are presented on the last day of class. These awards range from awards for the most trades ("The Plunger Award"), to awards for the most money made and lost, to the least trades ("The Chicken Award"). In recent history, German said the most money made was $42,000 in 1975 and the most lost was $21,452 in 1986.

"The class was great," said James Wolff '90, "especially since it was topical. Many of the marketing examples used in class were up-to-date, real life problems."

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The Half Moon Bay Experience

IT WAS NEW, FUN AND EXCITING, but it was also hard work, and it definitely was profitable for all concerned. It was the Half Moon Bay Experience, one which will not soon be forgotten by its participants.

Last January, a group of 15 Cornell students and one lecturer set out for the small seaside community of Half Moon Bay, California, one hour south of San Francisco. The students, most of whom were communication majors and most of whom had not known each other before, descended on the scenic little seaside community to undertake an internship for Mid-Coast Television (MCTV), the local community-access station founded and run by Cornell communication alumna, Constance Malach '73 MPS '74.

The whole idea for the internship program came from communication major David Williams '88 when he attended the annual Department of Communication Convocation at the beginning of fall semester 1987. After listening to the keynote address delivered by Malach, in which she described her experiences in establishing MCTV, Williams came up with the internship idea. He suggested to Malach that she consider granting internships to students to conduct a survey of MCTV viewership, and of local businesses (as potential advertisers for the station). It was from this germ of an idea that the seeds for the Half Moon Bay Experience were planted.

"The fact that this was a student-inspired idea says a lot about the creativity of students and also the willingness of the administration to implement student ideas," said Malach.

Despite the vacation-land setting, the students worked hard and diligently, putting in as much as 18 hours of work some days during their two week internship. Under the watchful supervision of communication lecturer Robert Roe '68 MPS '81 and the professional guidance of local business consultant David Cresson, owner of the Half Moon Bay-based Consumer Survey Center, the students developed, wrote, conducted and analyzed the results of two surveys for MCTV.

First, there was a 20-minute telephone survey of 200 coastside residents aimed at finding out their viewing habits in relation to MCTV. Then there was the second survey in which the students interviewed almost 150 local businesses door-to-door in order to solicit useful information on their business advertising practices and advertising needs.

But the work did not end here for these 15 students and their advisors. Once the students had written the surveys and collected the data, they turned to computers to input and tabulate the information. Therefore, by the end of the two weeks, they had finished compiling all the raw data. But the job did not end here either. All the information that was compiled in Half Moon Bay was then brought back to Cornell later that month when school re-opened for spring semester. Back on the homefront, the students and Roe met to complete the final survey analysis.

According to Cresson, just the telephone part of the survey alone would normally cost $6,500 and take three months. This is especially important because MCTV, a non-profit, small community-centered and volunteer station, would not have been able to afford the commercial costs of conducting the surveys.

For their hard work, the students received three credit hours and gained a wealth of experience that they no doubt can always treasure. Despite the hard work, Malach assured that the students would get more out of the experience than just long hours. Therefore, she arranged several trips to San Francisco and other area tourist attractions in order to make their stay in Half Moon Bay more enjoyable. Some of the braver students even got the chance to go California surfin' before the two weeks were up.

According to Roe, the internship offered many benefits to the students. "It gave them the chance to go out and use academic and interpersonal skills in a situation that accurately reflects many experiences in the social and employment world," said Roe. Roe also added that the project forced them (the students) to go through the whole research procedure from conception through to implementation and analysis, and thus was good experience in fine tuning their problem solving abilities.

But the benefits that intern Charles

Intern Janet Achenbach conducts a phone survey for MCTV. The phone survey was one of two surveys written and carried out by the students.
Whitt ’89 derived from the experience were more personal. “It was good to get the chance to go out west,” said Whitt, “but what I got most out of it was learning how a small community station operated, because one day I would like to work in a small community setting in radio or television.”

The students were not the only beneficiaries of the internship. Roe, known to the Half Moon Bay interns as “Bob,” also believes the project was beneficial to himself, as well as the students.

“It gave me a chance to work closely with undergraduates and I don’t get the chance to do that often because of class sizes,” explained Roe. He added too that sometimes professors seem to interact more with the course material than with the students who are trying to master the material, and this often “breeds detachment” between faculty and students.

The Half Moon Bay program was everything but a detaching experience. All the students praised Malach and her husband Michael Day ’73 for the couple’s overwhelming generosity while they (the interns) were in California. The students, who financed their trips to the west coast from their own pockets were delighted when Malach arranged reduced rates for their living accommodations, and even arranged free meals at some of Half Moon Bay’s finest restaurants. Even now, some of the students still keep in touch with Malach and their other new-found California friends.

It is on these grounds of continuing a relationship between Cornell and its alumni that Department of Communication Chairman Royal Colle PhD ’67 hopes to “institutionalize” an annual Winter Break program such as the Half Moon Bay Experience. “The word ‘experience’ is not used lightly either,” said Colle stressing that last year’s program, which he called “very successful,” was not “a Half Moon Bay ‘vacation.’ ”

In hopes of making this type of program an annual event, Colle said he plans to use three criteria. First, he hopes to find alumni of the department or university who would be interested in supporting such a program, in return for the interns carrying out needed services. Second, although the project need not be another survey, it should be “consistent with what we do in the department.” And third, recognizing as Malach did the importance of the social aspects of such an experience especially over a winter break, Colle hopes to find “a pleasing environment and preferably with a good climate” in which to do this.

“I would like to expand the opportunity maybe even across some national lines and into another country,” said Colle. Colle stressed, however, that the program would only be expanded if there is interest on the part of students, as opposed to expansion for expansion’s sake.

A year later, there is also good news coming from the other side of the country. Malach has made some similar plans in terms of institutionalizing an internship program at MCTV. This January, she will be taking on an intern from a university in Massachusetts who will spend 20 hours per week during the entire semester working for MCTV.

Malach sees the internship as a “certain type of contract” that commits a student to his or her job. Malach also said an intern is a “much more secure investment in a volunteer,” especially at a station such as MCTV which thrives on volunteers.

Although Malach says it is still too early to analyze the full effect of the Half Moon Bay Experience since the final results of the surveys were completed in November 1988, she said that the station is “flourishing.” Malach said she has already successfully used some of the preliminary results in a new brochure promoting the station to local residents and advertisers. As a result, MCTV has seen an increase in volunteers as well as advertisements from local businesses on the station’s “Ad Channel.”

The media coverage generated in 1988 by the student surveys and the students themselves has also been beneficial to MCTV. According to Malach, more people are now more aware of MCTV and its programming than a year ago. “The Half Moon Bay Experience certainly helped to increase our (MCTV’s) visibility in the community,” explained Malach. “It was a great public relations and marketing tool for the station,” she added.

Clearly, all the players in the Half Moon Bay Experience have come out winners: MCTV and Malach, the communication department and the University, Roe and 15 hard working students. And though Half Moon Bay will be a tough act to follow, many more students, professors and alumni will benefit in the future if they chose to follow paths like the one which led to Half Moon Bay.

by Charmian A. Todd ’90
A NEW GENERATION IN FARMING IS evolving. The fundamentals of the traditional one-family farm may still be secure, but things are changing. Farmers are willing to try new things and venture out into new ideas, including vacations. More and more farmers are willing to leave their farms in the hands of other people for vacations or to attend other special events. According to Paulie Drexler ’74 and Ed Drexler ’75, it may become a precedent.

The Drexlers recognized that it was hard for farmers to get away on vacations and decided they would service this problem. Three years ago they set up a farmsitting business, now named Farm Sitter Service, Inc. Their service has since expanded from the small two-person Drexler operation to a legitimate six-person agricultural business. Farm Sitter Service, Inc. serves more than 100 farms all over the northeast.

Paulie Drexler said their business is exploding. Farm Sitter Service, Inc. sends experienced farmers to other peoples’ farms to run the farm while the owners are away. Drexler said they mainly serve one-family dairy farms which vary in size up to 100 cows. Drexler said, “Agriculture is becoming less and less a way of life and more and more a hard-nosed business.” One of the largest reasons for the farmsitting success according to Drexler is that many farmers today have been raised with non-farm neighbors and they live farther away from relatives and friends.

Drexler said Farm Sitter Service, Inc. is a service business with quality people doing a quality job. “Any job, no matter how much you love it, becomes a prison if you can’t get away.” One client of Farm Sitter Service, Inc. is a man who had not been away from his farm for 29 years. Drexler feels farmers today are recognizing that it’s good business management to get away. She said, “There are a lot of good people out there milking cows whose only option up until now of getting away from the cows was to sell them.” She said farmsitting gives them another option and improves their perspective.

Once farmers try the farmsitting service they seem to get hooked. Farm Sitter Service, Inc. services over 90 percent in repeat business. One might presume, however, that some farmers have reservations about leaving their livelihoods for the first time in the hands of strangers. Drexler said, “Everybody would be anxious about leaving their entire source of income and their home in the hands of anyone else. The investment we’re dealing with often exceeds a million dollars.”

Drexler said not everybody can be a quality farmsitter. “It’s not an assembly line job. Cattle have about 100 ways to drive you nuts in one day.” She said college degrees and youth can tend to work against people. “For most of our clients, to inspire any kind of confidence, you’ve had to have been an owner of a farm.” Farmers count on degrees of maturity and self-confidence and she said, “Our guys are really pretty fussy and this job is a challenge to them. It’s one thing to be doing a good job on your own farm, but it’s another thing to see how well you can do it on everybody’s farm.”

Farmsitters need to be flexible and not judgmental. They must adopt to the farmer and the farm. “There are about 40 different ways to do anything and all of them are right. If a farmer wants you to do it one way on his farm, then you do it, and it’s none of your business why.”

The Drexlers got their start in farming after graduating from Cornell with degrees in animal science. The idea for Farm Sitter Service, Inc. was established when they tried to leave their own farm in 1980 for a vacation. The Drexlers had won the New York Farm Bureau’s Outstanding Young Farmers Award that year for the exceptional management of their 62 cow dairy farm in Montgomery County, New York. In conjunction with the award, they won an all-expense-paid cruise.

The night before the couple was to leave, their hired herdsman was hospitalized. They were lucky enough to get the help of a local retired farmer to take his place. Drexler said, “Major things went wrong while we were gone, but nothing Garth couldn’t handle. However if he had been a person who needed supervision, which is often the case with hired farm help, our two emergencies might have been disasters.”

While the Drexlers were on their
cruise a main water line had frozen, broken open and flooded the barn, and one of their best cows aborted... Werbeia on the Werbeias' dairy farm in Nelson, N.Y. The Drexlers will run the farm while the owners go on vacation.

Farmsitters Ed and Paulie Drexler speak with John and Colleen Werbeia on the Werbeias' dairy farm in Nelson, N.Y. The Drexlers will run the farm while the owners go on vacation.
WORKING IT OUT

by Brenda Davis '89

SOME PEOPLE CAN AFFORD TO GO to school and never work, even for spending money. Some students pay for everything themselves. Most just work to earn spending money and independence.

But either way, working takes time away from being a full-time student. When some people rush home after lab to do some reading, or go to dinner, others rush to a job to work for several hours. Then, after work, they go home to study.

"It’s so frustrating to hear people say, ‘I have to go home and go to sleep', because I always have to go to the bank and work," said Melissa Lanning, ag '89. Lanning works twenty hours a week at the Cornell Federal Credit Union. "Sometimes I want to be in a club or something, but I can’t because of work."

"Work cuts into my study time in that it takes up all of it except for from one to eight in the morning," said Jinny Van Deusen, a senior communication major in the College of Agriculture and Life Sciences. "When I scheduled, I didn’t schedule any time during the day to do homework, and that was a mistake."

Van Deusen loves both of her jobs, however. She works as a paid teaching assistant for Management of Human Resources in the hotel school. In addition, she is a public affairs intern at Planned Parenthood. "You do a lot better at managing your time because you have to," Van Deusen said.

"I average about three to five hours of sleep a night. Seven on the weekends," commented Hilary Altman, ag '92. "If you’re not doing anything else but work and school it wouldn’t be bad, but I like to do extracurricular things. I work at the radio station, play the piano, do sports in my spare time."

Altman works ten hours a week at Risley Dining in addition to being a full-time student and juggling all her extracurricular activities.

"It’s difficult sometimes, but once you find a balance, you’ve learned time management," said Altman.

"I didn’t work while I was in school but I really think students should," said Ceil Tuman, supervisor in Cornell Dining. "I look at my husband and he worked five different jobs while he was in school. He juggled all this stuff and it gave him a sense of responsibility and self-reliance that I never had. I think it really prepares a student for what real life is all about."

Working while under academic pressure is a valuable lesson learned by many students on campus. Over 5,000 students work on Cornell campus, estimates Bryn Kehrli, personnel manager of Cornell Dining. "In a survey we did in the ’85-’86 academic year, the number one reason students work was wages and the number two reason was camaraderie," said Kehrli.

Lately, wages have increased. Cornell has upscaled student employees wages in the last two years. Oddly enough, less students are taking advantage of the wage increases. Fewer students are working now than in the last five years, according to Kehrli.

Michelle Gawe, arts '89, would not work if she did not need the money. "I don’t mind the job, but it makes things more difficult. I tried working fifteen hours a week for a while, but that was too much, and now I’m down to ten," said Gawe, who works at Olin Library. "I need to eat, though, and my mother pays tuition and most of my rent as it is. Plus I like to see a movie once in a while."

On the other hand, Sarah Harrop, arts '89, works ten to fifteen hours a week, but not because she needs the money. "I work to earn spending money independent of my dad’s money," said Harrop. "College is an attempt to assert your independence and to explore the options that will be available in the real world."

Harrop thinks working is a valuable experience because she wants to be a professional manager. "You are around people and deal with people on a level that’s more real-world than that you have in classes," said Harrop, a student supervisor at Risley Dining.

For some people working during school is an absolute necessity. Tina Thompson is in the process of transferring into the English department in the College of Arts and Sciences. This semester she could not meet the tuition requirement, so she took a leave of absence to work and save money. "If I didn’t work, I wouldn’t be able to afford school," she said. Thompson would not be working if she were not forced to, "I’ve got a lot more interesting things to do than work."

Thompson expects to graduate in 1990 if things go well, but, she said, "If I had the money, I’d be out by now." She currently works for Cornell Dining, too.

Students at other universities have the same concerns. At some universities, earning money for school is easier. Cathryn Szekely attends Northeastern University, and is a senior in the co-op program for computer science. She earns enough in her internship quarters, working for companies like Aerodyne and IBM, that she can afford to pay almost half of her tuition.

Most of the colleges at Cornell University do not have co-op, however, so many students at Cornell work and attend classes at the same time, whether for pleasure, as a learning experience or as a necessary source of income.
A Center for Life

by Kiersten S. Fries '90

IN THE SPRING SEMESTER OF 1988, College of Agriculture and Life Sciences student Stephanie Schneider '91 moved out of her modern Cornell University dorm and into the Young Israel Residence House, a University living unit designed for Jewish Cornell students. She moved there because she had made a lot of friends at the house. The condition of the building, however, was terrible, Schneider said.

"The place was a dump," said Schneider. "The bathrooms were disaster areas, and the third floor looked like a slum tenement."

Another student, Josh Hurewitz ag '80 MBA '88 also lived in Young Israel when he was an undergraduate, from the years 1978 to 1980.

"Flushing the toilet was generally a hit or miss prospect, and there were leaks on a regular basis. Since we had a very low budget, everything was cheaply fixed," said Hurewitz.

But thanks to a recent multi-million dollar project run by an energetic retiree named Norman Turkish ag '56 MBA '60, Young Israel has turned into a beautiful, revived living unit. In addition, a new annex has been built to improve Judaic life at Cornell. The entire unit is now called The Center for Jewish Living.

According to Turkish, there were three reasons for starting the project. One reason was that the Young Israel house needed renovations. Secondly, there were no professional cooks at the house. Thirdly, since there was no real kosher option at Cornell, many students would not even apply to Cornell, said Turkish.

"In my opinion, some of the best students in the country passed up Cornell because there were no kosher facilities. I love Cornell so much that I wanted these students to at least apply," said Turkish.

The newly restored Young Israel is, indeed, a sight to see. "We renovated the house full-scale. Everything was redone," explained Turkish. Residents seem to be quite happy with the changes. "The rooms are just gorgeous. It's a pleasure to live in Young Israel now," said Schneider.

Young Israel also encompasses a number of new recreational and religious facilities, including a "beautifully restored" Beis Medrash sanctuary, a living room, study, music room, and recreational room. The sanctuary, designed in the traditional Jewish Orthodox style, includes nine stained glass windows with a design of grape trellises.

"I chose grapes for the windows because Cornell is a premier agricultural school. Some of the best grapes have been developed here at Cornell," said Turkish. "I wanted an ag theme because I was an aggie."

In addition to the completely remodeled living and study rooms, a state-of-the-art music room was made entirely sound-proof for students to practice instruments or listen to music without disturbing their neighbors.

"I was a student here once, and I tried to include everything I thought a student could need, including two free laundry facilities," said Turkish.

The recently built annex, which completes the Center for Jewish Living, is the new kosher dining unit, and it includes three kitchens (meat, dairy, and Passover) designed by two Cornell hotel school professors. A 24-hour snack area is also available, providing good kosher food for students whenever they want it.

"This is not just any dining facility," Turkish said. "It is par excellence. Not only do students eat here, but it serves as a Jewish art exhibition hall as well. We have installed a security system, and we hope to attract exhibits from different places around the country."

Formal gardens designed by the Cornell Plantations grace almost half of the Center's land. They will be complete in June 1989 when a newly built gazebo will adjoin a European courtyard to provide a "beautiful place for walks and talks," said Turkish.

With all of these excellent facilities, Turkish hopes to attract visiting scholars (who can stay and eat there for free) and Jewish conventions during the summer.

The Center has already hosted such prominent people as Ambassador Kenneth Adelman, former United States Representative to the United Nations and Director of U.S. Arms and Disarmament Agency in Geneva, Switzerland, and Robert E. Herzstein, author of "Waldheim: The Missing Years," the book that exposed West German President Kurt Waldheim as a former Nazi war criminal.

Hurewitz said there will be competition in years to come for people to live at the Center, which only has 21 double rooms. With such new, extensive facilities, many Jewish students will jump at the chance to reside there.

Students are optimistic about the Center's future and the effects it will have on Cornell Jewish life. "It will be the focus for Cornell Jewish students," Hurewitz said. "There has never really been a focal point for them at Cornell. It will be a very vibrant organization."

Without a doubt, the Center for Jewish Living is certainly a center for Jewish life.
"They also grew behind my House, and one large tree, which almost overshadowed it, was, when in flower, a bouquet which scented the whole neighborhood, but the squirrels and the jays got the most of its fruit; the last coming in flocks early in the morning and picking the nuts out of the burs before they fell. I relinquished these trees to them and visited the more distant woods composed wholly of chestnut. These nuts, as far as they went, were a good substitute for bread."


**THOREAU'S WORK REFLECTS A TIME when chestnut trees flourished in the eastern United States.** Unfortunately, as a result of a disease, known as Chestnut Blight caused by the fungus *Cryptobascis parasitica*, the American chestnut has been nearly wiped out across the country.

However, today there is new hope for restoring the American chestnut, *Castanea dentata*. Professors and scientists in the College of Agriculture and Life Sciences at Cornell University are part of a nationwide effort to bring back this valuable tree.

American chestnut trees, at one time, ranged throughout the east, from Maine to Georgia. The Appalachians were covered with these trees. It has been estimated, according to Associate Professor Dr. John W. Kelley, in the Department of Natural Resources, that 25-30 percent of all eastern hardwood forests were chestnuts. There were almost 3.5 billion American chestnut trees growing in the United States during the 1800s.

"The chestnut provided an important source of food and wood to those people living in the Appalachians," said Kelley. "Animals such as bear, deer, turkey and squirrels also consumed the chestnuts. Each full grown tree could produce nearly 3.5 bushels every year," he added. The chestnut was a productive and very useful tree.

Problems with the chestnut were first noticed in the late 1800s. The specific disease, however, was not identified as a blight fungus until 1904. Kelley explained how the disease was "probably introduced into this country from diseased nursery stock of Oriental chestnuts. Japanese and especially Chinese chestnuts had developed a measure of natural resistance to the blight and were therefore not as affected by the deadly fungus. However, the American chestnut was highly susceptible to the blight and it spread rapidly throughout the country's chestnut range. By 1950, the American chestnut had disappeared, for all practical purposes from our eastern forests."

Kelley recently became involved with the restoration of the American chestnut when new advances in the field were brought to his attention by professor emeritus Allan Newhall PhD '28 of the Department of Plant Pathology. Newhall informed Kelley about research that the American Chestnut Foundation had been conducting. Newhall also suggested the possibility of Kelley becoming New York state's coordinator for the national organization. Kelley accepted the invitation and began to focus his attention on the restoration. He became specifically involved with recording locations of surviving American chestnut trees that exist in New York today.

"The blight does not kill the tree's root system. From the surviving roots a progression of sprouts grow, live for a few years, are killed by the blight and are replaced by new sprouts. Because of this, much of the original American chestnut gene pool continues to exist and will play an important role in the eventual recovery of the species," said Kelley.

Kelley took the opportunity to be-
pected. The tree looked more like the Chinese variety, short and stout, and had few or none of the American chestnut's qualities. Scientists are now working with back-crosses of the first hybrid and the original American chestnut parents, in order to gain more of the American characteristics.

The second advance involves the discovery of hypovirulence found in the European chestnut varieties. "This hypovirulence is the result of a naturally occurring virus-like factor that attacks the blight fungus, making it less deadly," said Kelley. According to Kelley, hypovirulence has been found in the United States. Currently, scientists are seeking to learn more about how this disease of the blight can be used to provide a practical biological control.

Tissue culture is the third major advance. "When scientists have successfully produced an acceptable hybrid chestnut, then that single plant could be replicated a thousand times through tissue culture. While there have been some problems with refinement of this technique to produce self-rooted cultivars, initial success shows promise," Kelley said.

The fourth important step involves genetic engineering. Kelley explained that geneticists are working with the chromosomes of both the American and Chinese varieties. They are trying to locate the gene controlling blight-resistance. "Research at this point looks hopeful because so far the resistance seems to be a relatively simple inheritance. This is encouraging news," he said.

The last advance in this area concerns the study of population ecology. Little is known about this area because there are not many viable American chestnut populations left in the United States. "There is one isolated, and still healthy population of the American chestnuts that were found in Wisconsin," Kelley said. He added, "This is a fantastic opportunity to study a population of these trees before the blight affects them."

Newhall is also excited about his involvement with the restoration. During the fall of 1987, he obtained permission from the College of Agriculture and Life Sciences to plant hybrid chestnut seeds of a cross between the Chinese and American varieties in one of the greenhouses on campus. Newhall received the seeds from the Chestnut Foundation in Minnesota, which has been in existence for three years. Five of the six seeds germinated and they were transferred to Arnot Forest.

"These plants definitely show signs of segregation because some look like the Chinese variety and the others resemble the American tree. This is the first time chestnut crosses have been germinated at Cornell," said Newhall.

Newhall, at the age of 94, was determined to make Cornell aware of the restoration project. "I like to act as a spark plug," he explained. "I feel good about making the ag college interested in the chestnut restoration," he added.

Newhall has been busy with publicizing Cornell's involvement in the restoration project. He contacted several state assemblymen, as well as Governor Mario Cuomo. "I wrote to them in order to gain important political backing so that we might gain a better handle on the project," Newhall said.

New York state Assemblyman Francis Pordam was one of those responding to Newhall's requests. Pordam is now interested in establishing the National American Chestnut Research Center in New York state. He would like it to be associated with the State University of New York at either Cornell or Syracuse. "It is an appropriate place for this research center, because after all, New York is where the blight first began," said Kelley. Kelley explained, "The research center's purpose would be to assemble a critical mass of scientists to provide a focus for research and fundraising." Assemblyman Pordam seeks to enact legislation for the state to fund the initial ten years of the research center. These funds would be used to acquire land, facilities, greenhouses and hire scientists.

Kelley enthusiastically explained his personal interest in restoring the American chestnut. "Most of us want to make some kind of contribution to mankind. We would all like to leave things a little bit better than we found them. I may not live to see the final outcome of this work but I still feel fortunate to be able to contribute to such a worthwhile effort."

Prof. Kelley examines a fruiting chestnut at the Cornell Plantations. The blight-resistant Chinese variety is crossed with the American type to create a hybrid which has the best qualities of each parent.
A Success Story

WE TAKE SO MANY THINGS FOR
granted. We can think, smell, hear, walk
and talk. All these elements help us to
be the best that we can be, giving us the
tools to pursue and achieve our goals.
But imagine never having one of these
senses. How would you function in
life? What would your life be like? Im-
agine being disabled.

According to the book Without Bias,
a guidebook for nondiscriminatory
communication, the term “disability
refers to physical, mental, sensory and
emotional impairments that interfere
with the major tasks of daily living.”
Karen Lauster '91 has a hearing dis-
ability.

Although many of us will never have
to face this dilemma, Lauster has dealt
with it all of her life. “I learned to cope
with it because I couldn’t let it get in
my way. My parents instilled in me the
philosophy to be the best I can be. I still
live that philosophy.”

“My parents discovered I had a hear-
ing loss when they called to me while I
was crawling, and I didn’t respond,”
she said, “They don’t know if I was
born with the impairment, or if it was
caused by a high fever when I was
three.”

“When she was a toddler, we’d call
Karen, Karen’ and she’d walk away
from us,” Karen’s mom, Judy Lauster
said. “She didn’t speak a lot when she
was a baby like her brother. My hus-
band and I thought there was a
problem.”

Lauster, the second of two children,
grew up in Westfield, New Jersey, and
was mainstreamed as a child. This
meant she was placed in schools with
hearing children instead of a special
school for disabled children.

Once the mainstreaming decision
was made, Lauster’s parents took her
for a hearing test to determine how se-
vere her loss was. “After the test they
found I had a severe hearing loss.
Eighty-five percent in one ear and nin-
ety in the other,” Lauster said.

The decision to mainstream came
because Karen’s parents wanted her to
be able to function in society. “We
wanted her to establish as much speech
as possible,” Mrs. Lauster said. Bob
Lauster, Karen’s father added, “We had
a philosophy to bring Karen up in a
hearing world. We wanted to treat her
just like our son.”

Now all that had to be done was to
Teach Lauster to lip read and speak.
“When I was three, my mom started
taking me to Long Island Jewish Hospi-
tal where I worked on one on one with a
teacher. This is where I learned how to
lip read,” said Lauster. “It was important
that my parents detected this [her hear-
ing loss] early, so I could learn to lip
read and speak as well as I do now.”

One of the techniques they used to
teach Lauster to speak was to repeatedly
show her pictures of everyday objects
until she recognized them and knew
them from the way that the teacher
moved her lips.

She remained mainstreamed through-
out grade school, and did well because
of the special attention given to her by
her teachers. “Academically I was al-
ways a very bright kid. My grades were
always above average,” she said.

But she still had to overcome her dis-
ability. Mrs. Lauster heard of a speech
therapist, Paula Fine in nearby Mount-
tainside, New Jersey who could help.
She did.

“I went to her for eight years. Twice
a week every week of the year,” Lauster
said. Of all Fine’s students, Lauster said
she was the fastest to learn. “I must
have been anxious to get it over with.”

Although the end result was success,
Lauster remembers times when it wasn’t fun. “I remember feeling ex-
tremely frustrated,” she said, “I thought
it was unfair that I had to go to therapy
sessions when the other kids were out
playing.”

Yet when she had the chance Lauster
was always out there with the other
kids. “I was the ultimate tomboy. The
only girl on the baseball, basketball and
soccer teams.” Competitive sports were
the outlet for Lauster socially. Being
good at sports gave her the ability to
communicate with the other kids.

But junior high school brought on a
whole different set of problems. “Be-
cause I was a late bloomer physically, I
was a late bloomer mentally, socially,
athletically and academically,” she said.

The transition from junior high
school to high school was difficult for
Lauster. She found her teachers weren’t

Karen Lauster can read lips, but she wears a
walkman-like hearing aid at big lectures.
giving her as much attention as they did in the lower grades. There wasn’t enough one-on-one attention. “I decided I had to motivate myself to do well and get noticed,” she said, “I had to stand up for my rights.”

Playing basketball and soccer helped to develop Lauster’s confidence. “It was very important to me because I learned about teamwork and communication which is very important in anything you want to do,” she said. She began to look at her disability from her teammates’ point of view, and realized how frustrating it was for them to play with her at times. “For the first time I was looking at it from their shoes.”

In the summer of 1985, Lauster was diagnosed with Usher’s syndrome. She had retinitis pigmentosa. One of the long term effects of this is blindness. “I thought ‘By age fifty I will be totally blind.’ I was devastated,” she said. “I pride myself on being a very perceptive person. I rely on my sight.”

“I learned to cope with it because I learned to cope with so much with my hearing, I wouldn’t let it get in my way,” Lauster said. “You have to live for the moment.”

Perhaps the biggest challenge in Lauster’s life was going to college. Her SAT scores were very low, though her grades and her high school achievement test scores were always good. But it was still difficult.

“I couldn’t do what the average person could do by sitting down and writing out an application,” Lauster said, “I had to make myself known.”

She attended several personal interviews at many schools, and she learned how to present herself well. She became interested in Cornell when she went to a basketball camp during the summer and then Cornell Women’s Basketball Coach, Linda Lerch recruited her.

Once she visited Cornell, Lauster was sure she wanted to attend, but she wasn’t sure she would be accepted. “Cornell was my ‘stretch’ school.”

After she was accepted, Lauster knew that the transition would be tough academically. “I realized that at a school as large as Cornell I would have to make myself known all the more,” she said.

But because of her perceptiveness and philosophy to never give up, Lauster believed she could do it. “I have to concentrate five times more than the average person,” she explained. “My concentration level is tremendous, except when I get frustrated.”

To cope in large lecture situations Lauster sits at the front of the room, and asks the professor to wear a device called a “phonic ear”. This is a device that has two parts. A transmitter that the professor wears sends a signal to a small Walkman-like device that Lauster holds to amplify the sound.

“I have never had a professor at Cornell refuse to wear the phonic ear. But this summer I had a professor at Wake Forest refuse to wear it,” she said, “I tried to stay in the course, but I dropped it after two weeks because I was lost. There are people out there that still discriminate.”

Lauster said it’s hard to tell a hearing person what she hears through the phonic ear because she doesn’t know what they hear. “It sounds like what an average person hears in a lecture. That’s what my dad tells me.”

Lauster does more than just attend classes at Cornell. She said that she has “experienced the best social life of her entire life” while at Cornell. In addition she is a member of the women’s basketball team.

As in academics, she would have to work hard in order to get attention in college basketball. “It was also harder for me because I couldn’t wear my hearing aids in college play.” This season Lauster has new hearing aids that are sweat resistant, so she can wear them in practice and games.

A human development and family studies major in the College of Human Ecology, Lauster is happy with her major. “The reason I chose HDF is because I want to spend my life dealing and communicating with people, because that’s what I am good at.”

She has succeeded in college even though, when Lauster’s parents found out she had a hearing disability, they didn’t think she would ever go to college. “I am the first one in my family to go to an Ivy League school. I’m proud of that,” Lauster said.

She deserves to be proud of that success, and all of her other achievements as well.

by Patricia A. Froehlich ’89
Natural Observations

LOUIS AGASSIZ FUERTES IS CERTAINLY one of Cornell's most celebrated alumni, but not for the reasons that his father, Estevan Antonio Fuertes, had intended. Louis' father was convinced that his son should have a respectable profession like his father had as a consulting engineer and later as an instrumental member of the Department of Civil Engineering in the College of Engineering at Cornell. But the young Fuertes, born February 7, 1874 in Ithaca, had an interesting obsession with wildlife, particularly birds, sparked by a collection of paintings by the famous naturalist and wildlife artist John James Audubon that Louis had seen when he was fourteen years old.

This exposition led young Fuertes to begin his career in drawing wildlife, much to the dismay of his father. His father became so distressed at the thought of his son becoming a wildlife artist that he invited botanist Liberty Hyde Bailey of the College of Agriculture and Life Sciences to come and view some of the boy's work, hoping Bailey would provide some insight as to what he should do about the boy's strange behavior. Bailey answered that he should be allowed to continue his pursuits, recognizing the teenager's crude but undeniable talent for wildlife art.

The elder Fuertes was hardly convinced that such a trivial hobby could produce any secure livelihood, and in the fall of 1893, Louis Agassiz Fuertes entered the College of Agriculture at Cornell University. Louis was not, however, the ideal student. His grades in most of the physical sciences and mathematics were quite low (his notebooks were full of caricatures of professors and friends), and only his outstanding achievements in drawing, vertebrate zoology and physiology saved his academic career.

He also took an avid interest in music, probably derived from his mother, Mary Perry Fuertes, who was a talented and dedicated pianist. Fuertes soon became a part of the Glee Club, which made several performance trips to large cities. It was on such a trip to Washington, D.C. in 1895 that he met naturalist Elliot Coues, who would later launch Fuertes into the ornithological lime-

ight. Even before he had graduated from Cornell with a B.A. in 1897, Louis had completed 111 illustrations to be published in the book Citizen Bird.

At the American Ornithologists' Union annual congress of 1896, he established relations with some of the most important members of the ornithological community, including Frank M. Chapman, Edward How Forbush, C. Hart Merriam and Abbot Thayer, who later helped Fuertes hone his artistic skills. During his undergraduate years at the University, he also built strong friendships with naturalist artist Anna Comstock and Bailey, both of whom were his professors at some time.

Between the time of his graduation in 1897 and his death, Fuertes was slowly recognized as the most prominent natural artist in the world. Alaska, the Bahamas, Mexico, and Colombia were just some of the places he travelled to during this time. He was constantly recording what he saw with sketches and magnificent oil paintings of birds and other animals in their natural habitats.

He was said to have possessed a remarkable ability to remember scenes that he drew and painted, catching on the canvas or sketch pad an exact and unmistakable likeness of whatever creature he happened to spot. Frank M. Chapman, a close friend and fellow ornithologist, wrote: "At the moment [of

seeing some particularly interesting bird] not a line would be drawn or a note written, but so indubitably and distinctly was what he had seen etched on his memory that it could later be visualized as clearly and faithfully as though the original were before him."

Fuertes made his home in Ithaca and maintained his loose affiliation with the University until 1922 when he was officially appointed as a resident lecturer. His talks, covering topics from zoological art to bird migration, soon earned him notoriety as an orator.

Arthur Allen, future director of the University's ornithological program and frequenter of Fuertes' lectures, wrote in a 1927 issue of Bird-Lore that "So vivid was his personality, so original was his vocabulary, so humorous his metaphors and so warm his human sympathy, that notes were never necessary. Students left the classroom inspired. They remembered everything he said and discussed it among themselves as though it had been a baseball game."

Fuertes was not only instrumental in establishing naturalist art, but also as a catalyst in the environmental movement. Roger Tory Peterson wrote in a 1942 article in Audubon magazine: "Next to him [Audubon], Fuertes' name will be remembered longest."

Before Fuertes' tragic death in a car accident in 1927 at the age of 53, he had produced thousands of paintings and drawings for books, magazines and private sale, and turned his hobby of wildlife illustration into art. Chapman provided an appropriate elegy at Fuertes' memorial service: "If the birds of the world had met to select a human being who could best express to mankind the beauty and charm of their forms, their songs, their rhythmical flight, their manners for the heart's delight, they would unquestionably have chosen Louis Fuertes."

Some of the information in this article was obtained from the books Louis Agassiz Fuertes by Mary Fuertes Boynton and A Celebration of Birds by Robert McCracken Peck.
Cornell Cooperative Extension Publishes Information on Coastal Erosion and Soil Compaction

The Cornell Cooperative Extension has a new publication entitled “Vegetation Use in Coastal Ecosystems.” Authors Arthur Lieberman ’52 and Charles O’Neill Jr. ’34, have written the bulletin to help coastal residents understand and deal with coastal erosion and potential property destruction.

Lieberman is a professor emeritus in the Landscape Architecture Program of the Department of Floriculture and Ornamental Horticulture, and O’Neill is a regional extension specialist in coastal processes with the New York Sea Grant Extension Program.

The bulletin helps land managers to become more aware of all the coastal processes affecting erosion of their coastal landforms over the years. It covers various structures and vegetative alternatives and their effects.

Lists of plants provided range from those that will survive the most severe coastal conditions to those considered more as ornamentals. Listed species include trees, shrubs, ground covers, useful native seashore plants and herbaceous perennials.

Victor Snyder, of the Department of Agronomy, has written a new Cornell Cooperative Extension fact sheet to help farmers understand and correct soil compaction, “Soil Compaction: Causes, Diagnosis, Prevention and Correction.”

Compacted soil impairs plant root growth, requires higher energy for tillage, causes poor drainage, high runoff and erosion, reduces the capacity of soil to store water, increases plant disease occurrence and hampers seedling emergence. Snyder pinpoints the causes of soil compaction, shows what it looks like, and then explains how to minimize or correct compaction.

Geneva Experiment Station Expands Seed Research Capabilities

Dr. Robert L. Andersen, chairman of the Horticultural Sciences Department at Cornell University’s New York State Agricultural Experiment Station in Geneva, NY., has announced unit changes designed to provide a greater range of services to the state’s seed industry.

Involved are realignments of responsibilities related to the Seed Testing Laboratory that will lead to expanded research activities.

“As a natural outgrowth of today’s emphasis on seed-science biotechnology, it is time to define more clearly the difference between traditional regulatory sampling to determine seed purity and quality for the benefit of both commercial growers and backyard gardeners, and research efforts into the nature of seeds themselves,” Andersen said.

The Seed Lab was formally established at Geneva in 1912. It was the result of requests by leading growers of the time for help in controlling weed and other contaminants. Over the years it has received international recognition as a leading seed science facility.

The 1988-89 Catalog of Cornell Cooperative Extension Publications is now available at Cornell Cooperative Extension offices in every county of New York State.

Among subjects covered are agriculture, home gardening, nutrition, child development, consumer economics, housing, clothing and animals. Video programs for commercial farmers and homeowners are also included.

“Resources listed in the catalog are just one way Cornell Cooperative Extension provides research-based information and helps you put knowledge to work,” said CCE director Lucinda A. Noble.

In Search of Outstanding Alumni

The College of Agriculture and Life Sciences is seeking nominations for its Alumni Association’s Outstanding Alumni Awards and Young Alumni Achievement Award.

A maximum of five alumni are selected annually for recognition based upon either:
• excellence in their profession
• leadership and service to the College of Agriculture and Life Sciences, and/or
• service to the community

One Young Alumni Achievement Award is granted to an alumnus under the age of forty considering the same criteria.

Last year Outstanding Alumni Awards were presented to: George ’39 and Katherine ’69 Abraham, Robert W. Bitz ’52, Gordon L. Conklin ’49, MS ’51 and Robert L. Thompson ’67. The first Young Alumni Achievement Award went to Daniel T. Decker ’74, MS ’76, PhD ’86.

Nomination forms are available from the ALS Alumni Affairs and Development Office. Nominations must be postmarked by May 15, 1989.
COURSEWORK IN TODAY'S COLLEGE of Agriculture and Life Sciences demands student computer literacy as well as traditional study skills and classroom instruction. Students complete paper assignments, accounting projects, graphic designs and perform statistical analyses behind computer screens. To many ag college students and professors, Room 160 in Warren Hall serves as an invaluable computer laboratory.

The facility houses 26 IBM personal system 11s, four Macintosh IIs and one IBM XT to aid educational efforts in an average of 15 courses a semester.

Using computers to teach may be accomplished in several ways. In most cases, the student is provided with a coursebook and documentation directions on how to use the computer program.

Another teaching method involves a set laboratory time for students. Computers are reserved so students may use programs under the supervision of teaching assistants, or if the class is small enough, the professor will work with the students. An instructor may use a machine to project the image from the screen to the front of the room, so students can simultaneously perform the steps they take.

Professors who use 160 Warren praise the facility's usefulness. With the help of the computer, Paul Eberst, professor of rural sociology in the ag college, said he can cover more advanced course material in Introduction to Sociology, resulting in a better education for the students.

Eddy LaDue, professor of agricultural economics, said his students can work faster on the computer and "It doesn't make any math errors." Using Lotus spreadsheets, Farm Finance students project monthly and annual cash flow statements for farm businesses.

Marie Wong '91, communication student and user of word-processing and design programs, said learning the programs is a good experience, since computers are "used in the communication field in the real world."

Users are not limited to students. Computer workshops are scheduled throughout the year to train staff from Computer Services, Cornell Cooperative Extension, Cornell faculty, and many other groups and clubs.

Warren 160 computer programs include databases (programs used to manipulate facts for analysis), computer languages (used to write programs), spreadsheets (a computerized ledger sheet), wordprocessors (for word manipulation) graphics programs (to make charts, graphs or lay out a page) and other more course-specific ones. There are over 25 available programs.

Although keyboards click and printers buzz today in 160 Warren, this was not always the case. Originally an agricultural economics classroom and then a Cornell Computer Services room for IBM terminals, Warren 160 underwent re-equipping by the ag college's own computer service in fall of 1984.

Fifteen students work as computer operators in the facility. "All of the operators are trained to be friendly, helpful and alert," said Florence Blodgett, supervisor of Warren 160.

Depending upon ag college finances, Warren 160 may expand to twice its present size to meet the growing demand for the facility's services, Blodgett said.

Where books, pen and paper left off, computers have taken over. Knowledge of computers is a must and Warren 160 ensures that ag college students will leave Cornell as computer literates.
About the Issue

Cornell is a university on the cutting edge of technology, but it also has strong roots in the past. This issue explores some old institutions at Cornell and looks ahead to new ways of doing things as well. Some articles show how Cornell's heritage has developed. We also invite you to learn about new programs for students, new organizations, new ways of running the College, and new problems at Cornell. You can see how traditions change as Cornell strives to maintain its standard of excellence.
THREE ANIMAL SCIENCE MAJORS will be experiencing the west coast dairy industry in the fall of 1989 as they take part in the first student exchange with California Polytechnic State University at San Luis Obispo. The exchange, devised to add even more to Cornell's unique Dairy Management Program, gives the students a once-in-a-lifetime opportunity to observe, learn and participate in dairy science outside New York state.

"Cal Poly has a very well-respected dairy science program—probably one of the top west," said Corwin R. Holtz, instructor in the Department of Animal Science and exchange coordinator. He should know. Not only did he attend Cal Poly as an undergraduate, but he has taught there and has kept faculty contacts. These contacts enabled him to start up this new program, which was contrived last spring with the help of David M. Galton, associate professor in the animal science department.

Holtz earned a MS at Cornell in 1986 and has been involved with eastern dairy industry practices since his move here. Because of his experiences on both coasts of the United States, he knows about the variations in the dairy industry that the Cornell students will see. "Among other differences, the herds tend to be larger in California and cows tend to be fed a different feed due to the availability of feed in that region," Holtz said.

In San Luis Obispo next fall, Beth Bennett, Robin Denniston and Travis Finn, all members of the class of 1991, will take courses that are similar to those that their Cornell classmates will be attending, except they will have a western flair. Lactation biology, dairy cattle nutrition, artificial insemination and farm management are some of the courses offered at the comparatively smaller sized Cal Poly campus.

"To get the most out of our courses, Corwin has suggested those that have stronger reputations at Cal Poly," said Denniston from Nassau, New York. She expects that new faces, extracurricular activities and a fresh setting will make her excited about course work again.

Holtz said that employment near Cal Poly before classes start would be an excellent supplement to the exchange experience in San Luis Obispo, a city the size of Ithaca on the coast between San Francisco and Los Angeles. Bennett is taking that suggestion and plans to find work for the month of August with Holtz's help.

"The exchange with Cal Poly offers a first chance to really get out on my own," said Bennett, who is from Holcomb, New York. "The courses may be similar to those that I would take here at Cornell, but the new environment will be a welcome change," she said.

Holtz noted that Cal Poly is primarily an undergraduate teaching institution while Cornell upholds a research atmosphere, the presence of Cooperative Extension headquarters on campus and teaching programs. Cal Poly has a larger student body, like Cornell, but an even greater number of undergraduate students.

The exchange students will pay their regular Cornell tuition but will have to arrange their own transportation. Since Cal Poly operates on a quarter system and Cornell uses a semester system, the Cornell students will not be able to transfer all of the credits that they earn in California.

The Cornell students also will participate in the out-of-class dairy science programs that Cal Poly has to offer. For instance, the university has two dairy farms; one is run by the university and the other is owned and operated completely by students.

"I want to learn as much as possible about the dairy industry and the exchange will let me learn things that are not taught in the east," said Finn. He wants to concentrate on herd management so that he can put those skills to use on his family's farm in Holland Patent, New York.

Holtz describes the new program as an "exchange of bodies" because the three Cornell students will be replaced by three Cal Poly undergraduates on campus. They will be treated to Cornell's fine instruction and educational programs such as the Dairy Farm Fellows, a senior level program that lets students troubleshoot real-life farm situations on the progressive farms in New York state.

Holtz is pleased that Bennett, Denniston and Finn will be representing Cornell next fall. He has high hopes for the program, which he describes as "innovative and opportunity-laden."
In Appreciation of ROBERTS

VISITORS, STUDENTS AND FACULTY of the College of Agriculture and Life Sciences are confronted with the strong image of the old College alongside that of the new Roberts Hall, with its elegant lines and weighty structure, invokes the College of yesteryear. Academic One stands alongside Roberts, commanding attention. This futuristic structure is a symbol of the new College. It is modern and overwhelming. Much care and attention is given to its construction, while Roberts, like other objects of the past, stands forgotten in its shadow.

Roberts Hall suffers from the abuses of time. Her walls shed paint, baring open wounds. Her steps are cracked, the result of constant use. Her external metal parts are rusty from exposure to rain and snow. Yet all of these ills seem minor when she is viewed from a distance. Seen from Tower Road, she is a study of elegant design. Her weathered walls, rising four stories into the air, are capped by an antique peaked roof with dramatic overhanging eaves. This palatial grande dame of the ag quadrangle demands appreciation from those who view her.

State architect George L. Heins designed Roberts Hall, along with Stone and East Roberts halls in 1904. The three buildings were constructed in 1905 by New York state at the cost of $290,000, according to University Archivist Gould Colman ’51, MA ’53, PhD ’62. Most of the money was secured directly from the state ($250,000). The remaining $40,000 was provided by the University when it bought the College’s old Dairy Building (presently the north wing of Goldwin Smith Hall).

The final design was an impressive one. Heins elected to construct three buildings connected by walkways instead of one continuous structure. Colman proposed that Heins was able to do so because “labor was relatively inexpensive in those days.” Heins also elected to build a steel-supported building, one of the first on Cornell’s campus. Since Roberts was built around a steel frame, all of her exterior brick and stonework are simply decorative. One can see exposed steel rising to Roberts’ roof when climbing her central stairs.

According to Colman, The first class was held in Roberts on October 10, 1906. Her official dedication occurred on April 27 of the following year. Prior to 1906, agriculture courses were taught in Morrill Hall, the original Dairy Building, the North Barn and on nearby farms. Colman noted, “There were lots of field trips taken with Professors Roberts and Bailey.’

In 1914, Roberts Hall received her present name from the trustees. She was named after Isaac P. Roberts, a former Director of the College of Agriculture. The name was a natural choice, for Roberts was seen as the father of practical agricultural studies at Cornell. Prior to 1914, Roberts Hall was known as the Main or Administrative Building of the College.

Since her dedication and naming, Roberts Hall has undergone several changes. Originally, she was connected to both Stone and East Roberts halls by walkways, or loggias, on two floors, as well as by a basement corridor. Stone Hall has been demolished. The young Roberts Hall also contained the College’s main library in her basement. This was not a permanent arrangement, for in 1914 the library was moved to 192 Roberts. Since then, it has been housed in Stone Hall, and presently it is located in Mann Library.

The main assembly hall in Roberts has also changed with the years. Originally, the hall could seat approximately 600 people. Important lecturers such as Bailey and President Theodore Roosevelt spoke in this hall. At the time of Roberts’ completion, it was the College’s largest lecture hall. Today, this lecture hall is represented by 131 Roberts, made smaller by walling off the sides to create offices.

Several collections originally housed in Roberts Hall have since been lost or relocated. A Hall Museum once existed on the second floor. Included in this exhibit were the Morris Collection of Edible Nuts (200 in all). On the third floor a massive collection of over 500,000 insects could be found. Finally, the basement was home to several miniature models of plows. Of all these objects, only the plows are known to exist today. Their home is presently Riley-Robb Hall.

Some things have not changed in Roberts. She still houses the College’s administrative offices, and she is still the main building and center of activity in the quadrangle. However, Roberts Hall today is but a remnant of the grande dame of yesteryear.

Perhaps she is destined to weather away with the years. Perhaps we should always remember her as she once was. The least we could do is to express our appreciation of Roberts.

by Michael Consorte ’90

In 1909, James Law Hall, standing on the current site of Uris Hall, was the home of the School of Veterinary Medicine. Stone, Roberts, and East Roberts stand in the background showing some of the Cornell history.
Imagine walking onto the AG quad in 1910 and seeing a massive 100-foot barn where the Computing and Communications Center now stands. Across the quad, you notice Stone Hall joined to Roberts Hall where Academic One is currently under construction. A quaint two-room schoolhouse used for rural education training occupies the Johnson School of Management grounds, and the Animal Husbandry Building is on the present Mann Library site.

Ever since New York state assumed responsibility for Cornell’s College of Agriculture in 1904, the College has continued to expand. According to Dean David L. Call ’54, MS ’58, PhD ’60, the ag college has been in a state of “continuing evolution” since its beginning.

Agriculture was taught within the endowed college when Cornell opened its doors in 1868. Classes were held in Morrill Hall, then called South University. Under the direction of Professor Isaac P. Roberts, the University built the towering North, or Roberts Barn in 1879. Roberts intended the barn to be a model for New York farmers. “To me it was not only beautiful, but physically restful and mentally satisfying on the inside, because it was the embodiment of my dreams,” stated Roberts in his autobiography.

In 1912, the North Barn was replaced with a building that launched two new divisions of the University: Comstock Hall housed the College’s Department of Home Economics, now the College of Human Ecology. The School of Hotel Administration was born in Comstock Hall as well. A cafeteria attached to Comstock Hall served as the hotel students’ first practical experience. Neta Kendrick, a retired lecturer who taught in the College of Home Economics in the 1920s, recalls a much different campus. “It’s a complete change. It looks like a different world,” said Kendrick.

The campus dairy operation has relocated several times in accordance with the changing needs of the ag college. In 1893, the dairy facilities moved from the Dairy House to the Dairy Building, which is now the north wing of Goldwin Smith Hall. The dairy operation’s next move was to East Roberts Hall in 1906. The dairy is now housed in Stocking Hall. The years preceding World War I saw a great boom in construction of agricultural buildings. The College expanded in 1912 with the construction of Rice Hall for poultry study. Fernow Hall was built the same year to house the nation’s first Department of Forestry, which was established in 1898. Caldwell Hall, now owned by the endowed part of the University, and Bailey Hall were built in 1913. Bailey Hall originally served as an auditorium for farmers’ weekly meetings.

Even the Depression failed to halt the ag college’s growth. The College extended the quad with the addition of the imposing Plant Science Building and Warren Hall in the early 1930s. Warren became the new home of the College’s Department of Agricultural Economics.

The Animal Husbandry Building stood with the Rural Engineering Building near the present site of Mann Library until the library was built in 1952. The library, one of the largest of its kind in the world, was built to house materials of the colleges of home economics and agriculture, which had grown considerably since the turn of the century.

In 1968, the ag college built the tallest structure on the Cornell campus, the almost windowless Bradfield/Emerson Hall complex. Dean Call said the lack of windows is due to the high-tech nature of the building. “They felt they could control the internal environment a lot better,” he said.

However, Bradfield Hall gave University and state officials no end of trouble. Bricks kept falling off the building at random. “I used to call it the ‘chicken’ building because it molted every year,” said Call.

A new wave of construction started in 1985 with the new Comstock Hall next to Teagle Hall. Call said that the style of each building is ultimately decided by the architect. “Really, the architect is given carte blanche,” said Call.

The newest addition to the ag college, the huge Academic One structure on the west end of the ag quad, is nearing completion. The building will contain a dining hall, auditorium, the College administration and several department offices.

According to Call, the ag college plans to renovate Mann Library and to demolish Roberts and East Roberts halls. Call said the demolition will begin when the offices now in Roberts have moved to Academic One. The area will remain vacant for about ten years when the ag college should receive funding from the state for a new plant science building.

What will the College of Agriculture look like 100 years from now? One cannot be sure, but given the ag college’s tendency to expand and improve its facilities, one would not be surprised if a member of the Cornell Countryman in the year 2089 writes, “Imagine walking onto the ag quad in 1989 and seeing Mann Library on the present site of Call Hall...”
HOW DOES THIS SOUND FOR A party? “Come one, come all, wear work duds, bring rags, rubber gloves, and any other supplies that you can spare. Activities include painting, cleaning the plated ceiling and more!” There’s a party going on at 414 Eddy Street. By late March, 1989, Collegetown will have its first member-owned cooperative market.

After the demolition of Egan’s supermarket, Collegetown residents have been in need of a new food source. “When it comes to restaurants, there’s a glut in Collegetown, but there isn’t a single place to buy fresh produce. It’s ridiculous,” said Collegetown resident Chrissy Schwinn ’89.

The founding members of Eddy Street Co-op intend to cater to this necessity, as well as to provide a great deal more to the community. While the stated objectives of the Co-op include providing locally-produced, wholesome food and quality goods at low prices, concerns such as instilling a sense of community, teaching cooperative values, educating members and operating the market in a democratic fashion are equally important to the Co-op staff. “A lot of us foresee this co-op as a neighborhood gathering place for students and permanent residents, something Collegetown doesn’t have. People will have a chance to participate and contribute in a variety of different ways,” said Cheryl Barton, head of logistics for the Co-op.

Greenstar Co-op, one of Ithaca’s larger food co-ops, has been helping the Eddy Street Co-op get started through contributions of labor and expertise. However, the Eddy Street Co-op will not be an exact copy of Greenstar. Co-ops are known for supplying completely natural foods, and for shying away from extravagantly packaged and processed foods. Greenstar Co-op follows this doctrine by offering strictly vegetarian products, and by avoiding sugar.

There is debate over including meat, beer and other typically unusual co-op products in the selections at Eddy Street Co-op. “First of all, we’re not going to be an exact clone of Greenstar. Eddy Street Co-op is here to serve a need and a market. Eighty percent of the Collegetown population is made up of students, and it’s important to give customers what they want,” said co-op president John Gold ’90. But, the objectives of customer education and of concerns for the environment and human rights will not be overlooked. “We want to teach the community, make them think about where their food is coming from,” added Gold.

Gold, a transfer student in the College of Agriculture and Life Sciences, found out about the co-op when it was merely an idea in the fall of 1988, after reading about the proposed co-op on a flyer at Greenstar Co-op. He began his involvement with the market by can-
vassing door-to-door to determine how extensive an interest Ithaca residents had in a Collegetown co-op. “It was amazing how many people were really enthused and willing to help out,” said Gold. “I thought it was important to see this non-profit venture happen.” Gold was largely responsible for researching New York state laws on cooperatives, and writing up Eddy Street Co-op’s certificate of incorporation.

The present organizational make-up of the Co-op includes a six-member board of directors: Gold, Vice President Nancy Wallace, Treasurer Martha Hamblin, Secretary Cappy Harrison ’89, Dan Hoffman ’72 and Louisa Edgely ’90. Approximately 30 regularly active members serve on assorted committees: Personnel, Outreach, Finance and Logistics (which includes the Floor Plan, Equipment, Product Line and Renovations). The staff recently hired two full-time managers—Aja Zahn and Paul A. Stokely.

The Co-op will operate on a three-tiered membership system. Members will pay a $10 membership fee and donate two hours of their time a month in order to purchase goods at the lowest prices. Non-working members will only pay the fee, and will pay 15 percent more than members for all products they purchase. Non-members are welcome to buy goods from the market, but will pay still higher prices.

Working members can donate their hours in many ways other than time spent portioning cheese or running the cash register in the co-op. Members who volunteer for community service at local institutions might receive working credit for those hours.

Right now, 414 Eddy Street, the building which once housed Stone Travel, looks torn apart and vacant—with scattered rugs, buckets and chairs. However, if all goes well with their upcoming city inspection, the co-op should open in late March, 1989. The essential major equipment has already been purchased, including a used walk-in refrigerator sold to the Co-op by their neighbor, Cabbagetown Restaurant. “We nicknamed it Minestrone, which means “the big one.” It’s a battle ship and none of us are quite sure how we’re going to fit everything in here, but it will work,” said Gold.

The staff is still striving to reach the original goal of $50,000 to open the Co-op. Approximately $32,000 in loans has already been secured, and staff members are still considering various alternatives to hit the final target.

Members of the council of the downtown Greenstar Co-op have recently voted unanimously on a six-month reciprocity agreement with members of Eddy Street Co-op. The stipulation is that working and non-working members of either co-op will receive comparable discounts at both markets. Gold expressed that some staff members of the Eddy Street Co-op imagine eventually bonding with Greenstar and other organizations. The businesses could thus order greater quantities of food and save more money. Ultimately more co-ops could be opened in surrounding areas, making food costs even lower. Gold added that the Eddy Street venture will keep everybody busy for quite a while.

The Eddy Street Co-op will provide fresh and inexpensive food to Collegetown residents. It will also serve as a community and education center. Every weekend the “work party” continues as members of the co-op work together to open the doors. If the present positive and motivated attitudes of the co-op members continue, the party will go on long after the Grand Opening.

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"IT WAS A GREAT LEARNING EXPERIENCE. There is nothing like hands-on experience to acquaint you with the real world," Kay Ganshaw '89 said of her internship with the Displaced Homemakers Center of Tompkins County. Fall semester 1988 she and five other students prepared and executed a public relations campaign for the Center through a class called Communication Planning and Strategy II.

The class, offered through the Department of Communication, was designed to sharpen students' skills in planning and evaluating public communication campaigns through discussion and study. Students then applied their knowledge to produce a campaign for an outside "real life" client.

The students are placed in teams of five or six and are assigned to a non-profit agency in Ithaca. Non-profit agencies which teams have been assigned to in the past include the Ithaca Centennial Committee, Task Force for Battered Women and the Senior Citizens' Council. Each team consisted of an account supervisor, account executive, director of research, director of communications, director of creative services and director of editorial services. This is similar to account management teams in real public relations firms.

"Being director of creative services for Displaced Homemakers taught me the importance of working as a cohesive group to accomplish a goal," David Holcomb '89 said. "Our goal was to increase awareness of Displaced Homemakers' various services. It was my job to take the teams' ideas, create artwork to represent those ideas and present it to the client."

As account supervisor, Gigi Bruno '89 spent a lot of time meeting with the client also. Her responsibilities involved reviewing the activities of her team and reporting their progress to both the client and assistant professor Carroll Glynn.

"I got a taste of what it is like to work in a time-pressured situation. We had deadlines to meet for class requirements but at the same time we were doing real work for an existing agency and we had to meet their approval too," Bruno said.

The team found it especially hard to meet deadlines when working with a non-profit agency because many of their employees are volunteers who work only a few hours a week. The Displaced Homemakers' Center felt that because so many of its workers donated their time, everyone should be involved in making major decisions.

"It was very frustrating on our end because quite often it would take over a week to get approval of just one piece of artwork," Holcomb said. "And when you only have three months to carry out a whole public relations campaign, a week is a long time."

Despite the long approval process, the team managed to accomplish quite a bit in just one semester. Under the guidance of Ganshaw, a survey was conducted to determine the general public's awareness of the Displaced Homemakers' Center and its services. From this survey the team was able to determine which age groups were least aware and what services needed to be promoted.

The team designed a brochure for the Center's newest service, The Registry, which matches in-home health care employees with prospective employers. They also wrote and recorded three public service announcements for radio and videotaped a 30-second public service announcement for use within the agency.

At the end of the semester, the class held a banquet to present its campaigns to the clients and a panel of judges. Each team was given 25 minutes to present their campaign, explaining formative research, the team's goals and objectives and the strategies used to carry out the plan. They also displayed any artwork and visual or audio presentations.

"It was a nice way to wind down after a semester's worth of effort. It was great to have actual completed projects to present to the judges and our client, and it made all the hard work worthwhile," Ganshaw said.

Holcomb agreed. "I was very pleased with what we accomplished. It was great practical experience and it was nice to be able to help the Center. I know they appreciated all that we did for them."

by Deborah H. Lippert '89
MANY COLLEGE STUDENTS HAVE A tough time finding off-campus experience to complement their course work. Finding a good internship can be more difficult than getting a job after graduation. But education students in the College of Agriculture and Life Sciences at Cornell spend one semester putting their academic skills to work in classrooms across the Empire State.

Last fall (1988), 13 agricultural education students combined teaching at schools in upstate New York with on-campus seminars. Students such as these receive 15 credits for their efforts, but more importantly, get to test the educational waters and to apply what they have learned at Cornell to classrooms at a different level. Faculty in agricultural education make on-site supervisory visits during the semester.

“Our program allows students to experience a real teaching situation,” said Prof. Arthur L. Berkey, coordinator of the agricultural education program. “In most cases, students find student teaching semester to be their most meaningful semester.” According to Berkey, college supervised student teaching experience is required to get a provisional certification (good for five years) to teach at state secondary schools.

Wayne Klotzbach ’89, who taught in Alden, New York last fall, said, “One of the biggest benefits student teaching offers is the chance to get out of theoretical teaching and into practical teaching. This helps you know what you’re getting into as far as your profession is concerned.”

Many students find that what they studied in the classroom is not directly related to their work after graduation. But student teaching means few education majors are misled upon leaving Cornell.

Jeff Perry ’89 also understands the value of a student teaching experience. Perry took his agricultural education skills to New Berlin High School last fall. “I went into the real world and got to actually work in a profession. By the end of the term I did everything my supervisor did—including grading. I was in control of the entire program. My internship showed me what to expect if I go out to teach after graduation.”

Student teaching is a valuable learning experience for not only future teachers, but for their supervising teachers as well. “It keeps me on my toes, and updates my teaching methods,” Al Chapin said. As an instructor at New Berlin High for the past 22 years, Chapin has supervised 16 student teachers, including Perry. “My students almost expect one every year,” he said. “A lot of times a student teacher and I will team-teach. The two of us can better teach students together. Now and then you do get a student teacher who is not up to par, but most coming out of Cornell are very well prepared.”

Berkey said the program “provides the opportunity for more varied instructional services to secondary school students.” Supervising teachers can teach different subjects concurrently, or work with one group of students while the Cornell student supervises the other. Furthermore, the Cornell teaching intern provides a second person, which is important since much of the work in secondary school agricultural and vocational programs involves laboratory work requiring individual instruction.

Since having a student teacher often means students can learn more about subjects they’re interested in, Berkey said that most students respond very favorably to having a college student as an instructor.

“The students and I had a lot of fun,” Perry said. “We worked really well together. I had no problem fitting in. They accepted me as their teacher.” Klotzbach added, “Some people have culture shock when they try to go back and teach. They realize that they were in the same seat just three or four years ago, and the students realize that too. Sometimes there is a discipline problem.”

Student teachers usually concentrate in one of six specializations during their brief tenure as head of the class. Farm production and management is the most common specialization, but students also work in agricultural mechanization, conservation, horse handling and care, small animal care and ornamental horticulture.

“With all my students I let them get their feet wet right away. They do anything and everything they will have to as a teacher of agriculture, and that covers a pretty wide spectrum,” Chapin said. Besides teaching, duties often include organizing field trips, coordinating FFA (Future Farmers of America) and other youth group activities, ordering instructional materials and learning the basic operation of a department.

“It went beyond my expectations as far as the time involved,” said Perry, who often put in 12 and 14-hour days. “But it also went beyond my expectations for enjoyment. You can’t put in 12 hours a day at Cornell and enjoy it as much.”

by Don Cameron ’89
IN AN EFFORT TO INCREASE THE growth performance of beef cattle as well as that of sheep and pigs, Dr. Donald H. Beermann, an associate professor in the Department of Animal Science, has just completed initial studies of the effects of growth hormone and of growth hormone releasing factor (GRF) in lambs. Although Beermann studied the effects in lambs, growth hormone and GRF could be used in place of steroid hormones by most meat producers, he said.

While most beef producers today use steroids to increase growth rate and efficiency, Beermann believes that there will be other viable alternatives to steroids, such as growth hormone and GRF.

The growth hormone, somatotropin, may be approved for use in dairy cows to improve their milk production as early as March, 1989, he said. A study by Dale E. Bauman, a professor in the animal science department, revealed a 23-41 percent increase in milk production—without side effects from growth hormone injections and no change in the milk's composition. (Cornell Countryman, April/May, 1985.)

"Approval for use in lactating cows was sought first, but later studies done with somatotropin indicate that approval should be given for meat producing animals this year or next," Beermann said. "And [approval of] GRF shouldn't be too far behind that."

Although somatotropin is produced in the pituitary gland, GRF, or growth hormone releasing factor, is produced in the hypothalamus in the brain, which acts on the pituitary gland to stimulate growth hormone secretion, he said.

Beermann included somatotropin and GRF in his sheep study for two reasons. The original studies with somatotropin were done on pigs with tremendous results, but attempts to obtain the same results with ruminant, or cud-chewing, animals failed. Beermann hoped to find out why and to propose GRF as an alternative.

Beermann injected four groups of lambs four times a day: one with ovine somatotropin, two with two different levels of GRF and, as a control, one with normal saline. The results of Beermann's studies were significant:

The growth rate of the lambs in the ovine somatotropin group increased 25-30 percent, and in the GRF groups the growth rate of the lambs increased 15 percent for one group and 25 percent for the other group. The amount of fat in the meat from the lambs decreased. The somatotropin group's fat went down 18 percent, and the GRF groups' fat decreased by 14 and 19 percent.

"Not only did we reduce the fat content in the lambs, but we also reduced the lipid [fat] concentration within the muscle tissue, which we call marbling," Beermann said.

One benefit of using growth hormone to increase growth rates, Beermann pointed out, is that these hormones break down when ingested. Steroids do not, although beef producers are required by law to follow a withdrawal period of about 60 days so that steroids are not present at slaughter.

Concern about possible steroid residues in imported beef led the European Economic Community to ban U.S. beef. "These hormones are in a totally different class of hormones than steroids, with absolutely no residues. Even if there were any [residues], they would be digested just like vegetable proteins are," Beermann said.

The ban could have had more political overtones than scientific basis, Beermann said. Steroids can be harmful, but, even if U.S. exported beef had steroid residues, the amounts needed to be harmful could not be accumulated solely from eating beef, he said. Beermann said he believes that steroids have become a sensationalized issue where beef is concerned. Beermann cited cases where women given large doses of a steroid hormone known as DES to induce abortions in rape and incest cases, later had daughters more susceptible to cervical cancer.

Because of this, DES is no longer used, Beermann said. But since these rare cases of cervical cancer were given so much media attention, people today are now very wary of steroids. Beermann pointed out that women would have to eat 1,000 pounds of beef (with abnormally high steroid residues) per week to accumulate enough steroids to pose any potential danger.

"The European ban of U.S. beef is unsubstantiated from a scientific, biological point of view, but the perception of tainted meat exists," Beermann said. "It [combating this perception] is a real concern."

Enter growth hormones and GRF. Beermann said he is hopeful that the European Community will accept the use of growth hormone and GRF and relax the ban on beef imported from the U.S.

Beermann plans to continue studying both somatotropin and GRF to determine the appropriate dosage of each and to find out how growth hormone affects nutrient use in animals' bodies. He believes that a complementary diet is an important influencing factor, he said.

"Minor alterations in normal diets will be needed to accommodate the growth hormone," Beermann said. With a new diet and new hormones, meat producers will be able to add to the American way of getting more for less.

by Elizabeth J. Hujsak '90
Pots of Green

IF YOU ENJOY INDOOR PLANTS, you probably would have enjoyed participating in the committee that decided which plants would be used in the recently renovated “Old Comstock Hall.” The building, located on the northwest corner of the ag quad, is now called the Computing and Communications Center.

In the summer of 1987, Cornell Information Technologies (previously Cornell Computer Services) moved into a large portion of the building and redecorated the interior. “We wanted the building to be ours,” said Judy Holley, facilities coordinator. “The plants were part of the decorating which we did.” The plants, some over six feet tall, provide a distinctive touch to the modern arrangement of walled-in offices and cubicles. The round, maroon planters and green leaves contrast nicely with the square books, computers and padded cubicle walls which dominate the decor.

Holley looked into buying plants for the building. “Some people had concerns about who would water the plants,” said Holley. Holley arranged for a maintenance contract with Dick Saunders of Saunders Greenhouse & Garden Center near Ithaca. “He supplied the plants and now he comes in and takes care of them,” said Holley.

Mariani Carpenter, manager of the software support group, participated in the committee that decided which plants would go where. “It was nice to be able to choose,” said Carpenter. “I’m very partial to palms and figs.” Saunders helped the plant selecting committee by providing cards illustrated with pictures of plants which he thought would do well in different areas of the building. Along with palms and figs, the committee selected a variety of plants including Chinese evergreens, rubber trees and ivy plants.

The committee also chose from different pot sizes. “It was hard to relate plant sizes to pot sizes,” said Carpenter. “Some of us did not realize how big a plant would have to be to fit in a 36-inch pot.”

“We were supposed to have more plants,” said Carpenter, “but the budget got trimmed. We only got about a third of those in the original plan.” Still, the plants are evenly distributed and all can enjoy them. Now that the plants are in place, some employees notice them more than others. “They’re nice, I guess,” said one employee. Some of the plants are decorated with brightly colored papier-mâché birds. Chris Stuart, technical consultant, could not miss noticing at least one of the plants. The palm outside his cubicle was recently clipped back so it did not block his doorway. “It was getting pretty thick,” said Stuart. Carpenter represents those who are most enthusiastic about the plants. “Plants break the pattern of all these inanimate things, like books and computers,” said Carpenter. “Having another living entity is a good thing. Plants are beautiful to look at, and they help us who work inside on computers all day stay in touch with the outside world.”

“The plants have worked out great,” said Holley. “We’ve had a lot of people come in here and ooh and aah over the plants.” Holley said that she thinks the plants help people working with computers keep stress levels down and remain in touch with reality. “People seem to care about the plants,” said Holley. “At first we had people watering the plants and they were getting over-watered, so we had to tell people not to water them.”

Carpenter said that it was a “bone of contention” to some that in a time of budget cuts the building paid someone to care for its plants. On the other hand, Carpenter said that, “It’s nice not to have to remember to water the plants, and he [Saunders] replaces ones which are unsuitable because of too little light coming in and other problems.” Holley said that the service comes at a relatively small cost.

Saunders is matter-of-fact about his work in the Computing and Communications Center. “I water the plants about once a week and dust them fairly frequently,” said Saunders. “There really aren’t any problems, although someone did spill coffee on a plant once.” Saunders prunes the plants to keep them healthy and to remove dying leaves and branches. Occasionally, when weather permits, Saunders takes the plants outside and hoses them off. “It really perks them up,” he said.

Saunders provides a valuable service to the people spending their days in the Computing and Communications Center. Carpenter explained the value well, saying, “People aren’t always conscious of it, but people are always attentive to a plant. Green inside is a good thing.”

by Tonya Joy Byard ’89
ON DECEMBER 19, 1913, THE MEMBERS OF CADUCEUS, A SMALL LOCAL FRATERNITY AT CORNELL, RECEIVED THE FOLLOWING TELEGRAPH MESSAGE: "WE ARE NOW ALPHA GAMMA RHO—WENT THROUGH 10:30 THIS MORNING—HAVE MET FIVE BUNCH OF MEN—ARRIVE NOON SATURDAY—SIGNED, J. J. SWIFT."

ONE YEAR LATER, ON DECEMBER 19, 1914, CADUCEUS OFFICIALLY BECAME THE ZETA CHAPTER OF ALPHA GAMMA RHO, THE NATIONAL AGRICULTURAL FRATERNITY. THE TELEGRAPH MESSAGE FROM SWIFT '14 SIGNALS THE BEGINNING OF AGR'S 75-YEAR-OLD TRADITION AT CORNELL.

THIS YEAR MARKS NOT ONLY THE CHAPTER'S SEVENTY-FIFTH ANNIVERSARY, BUT ALSO THE TWENTY-FIFTH ANNIVERSARY OF THE PRESENT CHAPTER HOUSE.

MANY THINGS HAVE CHANGED IN AGR'S 75 YEARS AT CORNELL. THE FRATERNITY HAS HAD TWO DIFFERENT HOUSES AT ITS PRESENT LOCATION AT 203 HIGHLAND AVENUE. IT HAS CONVERTED FROM A "DRY" HOUSE TO A "WET" HOUSE AND HAS SEEN OVER 1,500 YOUNG MEN ENTER THE BROTHERHOOD. YET THE CLOSE KNOT BROTHERHOOD BASED ON A COMMON INTEREST IN AGRICULTURE HAS REMAINED.

ANOTHER COMMON THREAD RUNNING THROUGH THE HISTORY OF THE ZETA CHAPTER IS ITS CLOSE CONTACT WITH ITS ALUMNI. THE ALUMNI OWN THE HOUSE THROUGH A CORPORATION IN WHICH EACH ALUMNUS IS A SHAREHOLDER.

The alumni are represented by a six-member corporation board who work with the undergraduate brothers on matters concerning the house. "The board is there for the boys to look to for advice," said former board president John Hicks '61. "Usually though, when a problem comes up the boys handle it without the board's help."

Alumni helped purchase the first chapter house on Highland Avenue, where AGR moved after leaving the local society's original settlement on Dryden Road. Efforts to purchase a house were begun in 1913 and finally the Bentley house at 203 Highland Ave. was bought and subsequently renovated to house about 30 men. This house remained AGR's home until 1964 when the new house was completed.

The first house at 203 Highland was always a dry house, meaning that no liquor could be served on the premises, with a few exceptions. "There was a dugout hole underneath the porch, and on occasion some of the boys didn't consider that part of the house," said Russell Miller '61, "but that was very rare."

The prohibition rule in the house meant the fraternity had to rent out facilities to hold its big social events. "This had advantages because it meant the house didn't get all messed up," said Miller.

On many occasions the dry house rule was questioned. "There were dry and wet advocates, and it made for some controversy," said Don Wickham '55. Slowly the fraternity changed its position and adopted a "damp" status, allowing alcohol in the house on special occasions. The dry status was lifted once the new house was built.

Decisions about policies of the fraternity sometimes cause controversy, but the process of making decisions as a group builds leadership ability. "Going through the exercise of making a serious decision on something like alcohol policy is an experience not everybody gets in college," said Professor David Galton, chapter advisor.

The leadership lessons learned at AGR have been displayed through the many agricultural leaders who have emerged from the house. "In ag business and production agriculture in New York, AGRs are in leadership positions and carry a lot of respect," said Lawrence VanDeValk '87.

One of the best examples of this leadership is the late Harold "Cap" Creel '16, Cap, a Cortland County dairy farmer, involved in all aspects of New York agriculture. He served as a state assemblyman, director of the New York State Fair, and president of the New York agricultural society. The list of his contributions and honors is lengthy.

Creel's service to the Zeta chapter was equally great. He was part of the alumni board that spearheaded the drive for the new house in the early 1960s. In 1984, he led a fund drive to put a much-needed new roof on the house. He was never afraid to ask the alumni for support, just as long as they
were treated fairly and thanked promptly," said Hicks.

His contributions to AGR were much more than just fund raising. "While I was on the board he was at all the meetings and always raised important points," said Hicks. "He always got things done by delegating tasks, and he had a way of making you want to do things. He looked you in the eye, shook your hand and told you if you had done well or not," said Hicks.

A. Wright Gibson ’17, MS ’28 was a Zeta chapter alumnus who served the College of Agriculture for over forty years. He served mainly as director of resident instruction, devoting his time to the interests of the students and their relationship with the faculty. He served as grand president of Alpha Gamma Rho from 1936 to 1938 and served the local chapter as secretary-treasurer of the alumni board from 1925 to 1962.

"Gibby, as we called him, was very influential at the national level and he was always a stabilizing force in the house and always highly respected," said Miller. The library in the new chapter house was named in honor of Gibson.

Many other Zeta chapter alumni currently hold important leadership roles. Milton Soper ’48 is currently on the board of the Alpha Gamma Rho National Education Foundation while G. Donald Calhoun ’72 is the treasurer for the national fraternity. Cornell University trustee Bernard Potter ’43 is also a distinguished Zeta alumnus.

These alumni were all involved in the building of the new house, a decision that many consider a turning point in the history of AGR. A drive had been started to add a wing to the old lodge when its facilities had become inadequate, but others discussed building an entirely new facility. "There was nothing more we could do with the old house," said Dean David Call ’54, MS ’58, PhD ’60. "It had so many layers of paint that if we took the paint off it probably would have fallen down. So we decided to go for broke and raise the money for a new house."

Many outside observers noted the impact of this decision. "It was a crucial decision to build the new house while keeping the old house open. They never had to discontinue their program and have been able to keep things going well ever since," said Prof. George Conneman ’52, MS ’55, director of academic programs.

Today’s brothers have benefited from this wise decision and from additional alumni support in the form of scholarships available to current members. The Harold L. "Cap" Creal and A. W. Gibson memorial scholarships provide financial aid to AGR members. Other educational funds include the Westheimer Scholarship which provides assistance every other year for a member to study in Israel. The Diamond fund finances educational equipment for the house.

The board will try to rally the support of the alumni once again by kick-off a fund drive at the seventy-fifth anniversary celebration. The funds are needed for capital improvement projects for the new 25-year-old house.

Today’s brothers share a common heritage with the alumni, but they represent a new generation of AGRs and are in some ways different from their predecessors. "Today AGR plays a more important role in academic concerns and encouraging scholarship," said Call. "All students in the College now are more serious about academics."

Other alumni have noticed changes. "I’ve seen more guys going out into ag business and fewer guys committed to the home farm," said VanDe Valk.

Despite the changes, some things remain the same. "A lot of people I’ve met through AGR are the key agricultural leaders of today, and based on the caliber of the people I know in the house now, I don’t see that changing," said board member Gregory Wickham ’78.

The effect time has had on the brotherhood can best be summed up by Don Wickham’s observation. "I’ve seen three sons go through the house and the involved, caring sense of brotherhood hasn’t changed a bit," said Wickham.

Seventy-five years after J.J. Swift sent his telegram message, the dream of the brothers of Caduceus lives on. Like agriculture, their common bond, their fraternity has seen many changes. But on the weekend of April 8, 1989, alumni, undergraduate brothers and friends of AGR will come together to celebrate what they hope will never change—75 years of brotherhood.
FOR THE LAST YEAR, CORNELL students and faculty have been using the online catalog, a powerful electronic tool that has dramatically changed the way they use the library. The online catalog is a computerized card catalog that allows anyone to get quick access to information on over 1.5 million volumes in the Cornell Libraries.

With the online catalog, people at any of Cornell's 16 campus libraries can search through Cornell's collections for books, periodicals, recordings and many other types of holdings. The user follows simple directions provided on the computer screen, entering the desired title, author or subject. The computer then searches through its electronic data base for appropriate entries. It lists information about the items shown on the screen and, if requested, the computer prints this "electronic card" on a computer printer.

According to Lydia Pettis, technical coordinator of University Libraries, all works cataloged since 1973 have been entered into the computer, as well as special collections and the holdings of some smaller libraries. All new acquisitions are automatically entered into the computer when they arrive.

Mann Library is currently entering older records into the online catalog, a process called retrospective conversion. Bill Coons, information literacy specialist at Mann Library, said that by next year, almost 90 percent of the Mann Library collection will be entered into the system.

Special terminals with accent characters are used to work with Cornell's extensive collection of foreign works. Books and periodicals written with non-roman characters (such as Chinese or Arabic) have had their titles romanized for use in the online catalog.

Pettis noted that circulation has increased in Olin Library since the introduction of the online catalog because it is so much faster and easier to use than the manual system.

Karl Auwaerter '89, an undergraduate in the Department of Floriculture and Ornamental Horticulture, uses the online catalog for research papers. He believes that the computerized catalog has helped him find more references because it is fast and complete. "It's the first thing that I go to for research," Auwaerter said. He remarked that the system is very easy to use; he has never even had to read the manual.

Coons said that some people, especially those researchers who have established library use patterns, are still more comfortable with the manual card catalog. "If someone else rearranges the furniture in your living room, you can trip at night on your way to the bathroom," Coons explained.

James Madison, assistant professor of biochemistry, said that he likes the new online catalog. "I've had pretty good luck with it. It's a lot quicker than rummaging through a drawer of cards."

Jane Blume '89, a graduate student in consumer economics, often uses the online catalog to look up references cited in large computer databases. She finds that the computer catalog is good for getting fast information on a subject, but still refers to the card catalog. "Unfortunately, the computer can only search for about 35 characters at a time," Blume explains. "If you are looking for a title that begins 'United States Department of Agriculture Research and Statistics Division,' the computer will list hundreds of references, often not the ones you want."

According to Coons, people will soon be able to access the online catalog from computers in offices and dorm rooms. "It will open up a universe of information," said Coons.

In the future, the online catalog will also include information on circulation, so the computer can tell if a book has been charged out, and if so, when it is due. This circulation system will replace the labor-intensive McBee punched card system currently used by Cornell.

The online catalog will continue to replace the manual methods of searching during the next few years. New library acquisitions are no longer being entered into the manual card catalog, so soon almost everyone using the Cornell library system will use this powerful, time-saving system.

by Jonathan C. Kagle '89
IN SEARCH OF SPECIALISTS

MENTION CORNELL AND PEOPLE envision an intellectual enclave characterized by breathtaking beauty and mind-boggling knowledge. If you find yourself walking along the campus paths, you tilt your head and smile up toward the spectacular sunsets, landscaping and architecture that enfolds you, and you silently agree with these observations. Then, puzzled, you wonder, "Where's the knowledge?" Hundreds of scholars sit behind these latticed walls conducting research, unearthing brilliant discoveries. But where are they? You never knew. Until now.

Thanks to the University's Office of Sponsored Programs, such information is now available through a special database called CUSID (Cornell University Scholarly Interests Database). By keying in an individual's name or area of interest, designated by numerical code, a CUSID user can retrieve information such as a person's academic department, fluency in foreign languages, experience in foreign lands, scholarly interests and current research.

The database was introduced two years ago, following a survey of faculty, senior research and extension associates and academic librarians on the Cornell campuses in Ithaca and Geneva. In the survey, faculty members received questionnaires in which they were asked to list their advanced degrees, foreign country experiences, etc. By returning the questionnaire, participants agreed to make the information accessible to the public. Approximately 2,200 surveys were sent out; 800 were returned, a disappointing 30 percent.

"We really need more faculty to respond to the survey," said Araxy Terzian, CUSID project manager at Sponsored Programs, who designed the database on her office personal computer. "We're preparing a second, shorter survey right now, hoping that more people will respond if there is less to fill out."

"Although we have an overall positive feeling about the effort, the project is moving slower than I had hoped," said Jack Lowe, director of the Office of Sponsored Programs. "We don't have the resources for more sophisticated programming, and we don't have enough profiles to call it complete," he explained.

According to Terzian, the establishment of CUSID was possible due to interest expressed by the Cornell University Council Technology Transfer Committee, an alumni organization that assists the University in transferring knowledge to the public and in assessing the needs of industry. "The objective was to have in one place a centralized register of all research activities going on at Cornell," said Technology Transfer Committee Chair Gerald R. Schiller '45. "The goal is to help the University commercialize its research results so they are more accessible to the business world," Schiller explained.

"A secondary objective is to open up information channels within the University. Two people in two different departments might be doing research that is connected in some way. With CUSID they have the capability to keep tabs and help each other," Schiller said.

According to Terzian, response to the database has been positive. Heavy CUSID users thus far have been University administrators, faculty members seeking out colleagues with common interests and Cornell's News Service. On occasion, external organizations, such as corporations or government agencies, contact the Office of Sponsored Programs to locate experts.

"For instance, someone might call us and say 'We'd like you to distribute this information to those interested in frozen soils.' And then we go to CUSID and type in the code for frozen soils," said Lowe. One by one, CUSID would then list those who had identified frozen soils as an area of expertise or interest. With CUSID, the identification process is faster and more thorough.

"Without the database, we would have to call individual departments and ask if anyone there is interested in a certain topic," Terzian explained.

The Office of Sponsored Programs hopes to one day organize the database by key words. For instance, if you wanted to find an authority on X-ray diffraction, you would enter "chemistry" into the database and search through a series of subheadings. The plan calls for six levels of detail, each more refined than the last. If a person was interested in locating a Shakespeare enthusiast on campus, she would enter "English," and then "English literature," perhaps then "dramatists," and so on.

While there are still improvements to be made, such as more detailed key words and broader faculty participation, those who have utilized CUSID have declared the database a success, a means of opening channels within the University and those extending beyond the campus.

Jack Lowe, the Director of the Office of Sponsored Programs, is excited about CUSID, a program that dispenses information about Cornell resources to Cornell.

by L. T. Ryan '90
“WELL IT’S ABOUT TIME!” BARKED one Morrison Hall staff member to Robert Osborn, assistant superintendent for buildings care. Strangely enough, the comment was music to Osborn’s ears and it left him feeling a fine sense of accomplishment. Osborn has much reason to feel this way. He is one of the two co-directors of the first formal university recycling program in New York state, “Cornell Recycles.”

“It all began with a task force commissioned June 2, 1988, by Harold D. Craft Jr., associate vice president for facilities,” recalls Teresa Hargett ’79 materials manager for Maintenance and Service Operations. Hargett is the other co-director of Cornell Recycles. The task force included Pat Welch, representative of the state university campus; Bill Perkins, Residence Life coordinator of purchasing and housekeeping; Jim Wiggins, associate professor of business at the Johnson Graduate School of Management and Walt Smithers, UAW member. In addition to Osborn and Hargett, the task force was comprised primarily of people within the facilities administration.

Throughout last summer, the task force researched the feasibility of starting a formal recycling program at Cornell and what it would involve to inaugurate one. Three pilot programs were set up in campus buildings: Day Hall, the Humphreys Services Building and the Space Sciences Building. As it supervised the pilot programs, the task force studied the effectiveness of each program thoroughly to see if a campus wide recycling program would indeed benefit Cornell.

After a long, hard summer, the task force made final recommendations to Craft based on their research. The research and pilot programs had proven successful, and “Cornell Recycles” was born in September, 1988. Craft appointed Hargett and Osborn as co-directors of the recycling program. The focus of Cornell Recycles is on mixed office paper with collection facilitated by custodial staff.

“It’s a complicated process engineering a program for 10,000 staff with the assistance of 270 buildings care custodians,” admits Hargett. “But, it is a challenge and something to be proud of.”

Cornell Recycles aids the environment in that it does not contribute to the pollution of the atmosphere as when waste is burned, buried or dumped at sea.

Osborn says Cornell’s waste stream amounts to 8,000 tons a year and half of this waste is potentially recyclable office paper. Cornell Recycles has set a goal of recycling at least 25 percent of the total waste stream or 2,000 tons. Cutting down on waste will benefit Cornell financially when “tipping fees” go into effect in the next year or so. Tipping fees are the charges made for dumping waste into a landfill. The cost ranges from $40 to $65 a ton, in addition to a hauling fee. The recycling program could save Cornell over $120,000 in tipping fees, so it makes sense for Cornell to recycle and lower the amount of waste.

Cornell Recycles provides new, smaller containers labeled with red “Non-recyclable” stickers for each existing wastebasket. In essence, two containers labeled “Recyclable” and “Non-Recyclable” take the place of the one previously all-purpose wastebasket. The larger of the two with the white sticker holds the recyclable mixed office paper.

Jonathan McPherson, head custodian at Mann Library pointed out that Cornell Recycles has already cut down on trash. “It was hard at first, but I think it’s a good idea.”

The process begins with a simple decision, which basket do you choose? After the custodians pick up the trash bags full of recyclables, they transport them to the main loading docks of their buildings. Next, they place the recyclables into the new tilt truck, Cornell Recycles dumpsters. Then, Ithaca Scrap Processors picks up the dumpsters full of recyclables and does the sorting. The revenue generated from the sale of recyclable paper will be utilized to help offset the cost of the start-up and the continuing operation of the program.

“The Cornell community wants to recycle. Previously, it just never had the means, organization or equipment,” said Osborn. “Cornell Recycles is working. All we need is everyone’s cooperation. It’s something that most people at Cornell agree on.”

And that doesn’t happen very often, at Cornell or anywhere else. So go ahead! Join the new task force! After you’ve finished reading the Cornell Countryman, RECYCLE IT!
Saving Energy for Small Business
by Terese M. Angelastro '90

BUSINESS IS BOOMING FOR THE small Business Energy Efficiency Program (SBEED). SBEED is an energy consultation program of the New York State Energy Office and Cornell Cooperative Extension. Since its official program opening in 1986, 10,000 energy saving surveys have been completed for small businesses throughout New York state. Approximately 1,000 surveys have been conducted specifically for small agribusinesses.

Director of SBEED, Bruce John, said, "There's a lot of interest out there in what we're doing. Over 300 energy surveys a month are being conducted statewide." The purpose of the program is to keep small businesses successful in meeting overhead expenses by cutting energy costs. Promotional Coordinator for SBEED, Karen Rollo, said, "If a business conserves energy, it also saves money. Our surveys can show a business manager how. An average savings is over $1,000 a year."

SBEED defines a small business by the space it occupies. A small business is any business of 15,000 square feet or less. John said the need to serve small business developed from lack of knowledge by owners and managers on energy efficiency. He said, "Most people know what to do in their homes, but it's the small businesses that need help. Lighting is different, refrigeration is different, insulation is different."

SBEED's energy surveys are delivered to small businesses at no cost. A technician will spend two or three hours at the site of a business inspecting lighting, motors, furnaces and other operational systems. The technician will also go over all past utility bills and records. Rollo said each client will receive a written report, cover letter and energy budget breakdown after the site survey. The whole process will take about a month from the time a client calls a regional office for a survey to the energy report completion. Rollo said, "The technician will make energy recommendations that are cost-efficient and have the fastest pay-back periods. We want them to see results quickly."

Most of SBEED's recommendations refer to lighting improvements. John said SBEED recommends that most businesses switch to energy efficient fluorescent lighting. When replacing a traditional lighting system, small businesses will usually face conversion costs. John said after the installation of new energy efficient lighting, a small business can expect to save anywhere from 20 to 80 percent on its future electric bills.

Over 50 technicians in 15 regions statewide conduct the energy surveys. Each technician works out of a county Cornell Cooperative Extension office, and all are trained in the Department of Agriculture and Biological Engineering at Cornell. John said this local involvement with Cooperative Extension is what makes SBEED so successful. "People know extension and trust it. Plus we have nothing to sell in our energy surveys like commercial firms do."

The initial idea for an energy efficiency program started in 1980 with a two-man traveling energy conservation team sponsored by Cornell. The idea was then expanded to include on-site energy auditing. In 1983 the New York State Energy Office used petroleum overcharge funds, allocated by the federal government to states based on population and oil consumption, to set up SBEED as a pilot project. The program was expanded in 1986, and SBEED's contract with the New York State Energy Office is up for renewal in July, 1989. John said he expects no problems with re-funding. "We have a lot of support from the state energy office and the legislature."

John called SBEED "the most comprehensive program in the country." Rollo said, "We have a unique system with exceptional database, computer template and electronic mail programs." John said other states, universities and institutions are contacting SBEED for advice on how to set up similar programs. John said in January, 1989, SBEED representatives were invited to Alaska to give advice on implementing a small business energy program. He said because half of Alaska's population is based in Anchorage, a small business energy program would need modifications different from SBEED's structure.

Since July, 1986, SBEED's energy surveys recorded potential savings of $9 million for small businesses, agribusinesses, nonprofit organizations and farms in New York state. The SBEED program has saved energy dollars which can be put to more efficient use in the state's economy and agricultural system. ■
"I'D LIKE TO BE ABLE TO PARK ON campus, but I can't," said Kathy Langendoerfer, secretary of the Cornell Cooperative Extension 4-H office in East Roberts Hall. Many others at Cornell share the same thoughts concerning the parking situation on campus. Each day thousands of Cornell staff, faculty, students and visitors drive through campus, trying to park their cars. Most become fully aware of how tight the parking on campus really is.

"It's a real bad problem and it seems to have reached its peak this year," said Lieutenant Lisa Sprague, manager of auxiliary services at the Department of Public Safety. Sprague is in charge of campus parking and traffic enforcement and supervises the traffic booths on campus. The parking situation is often seen as a simple problem of too many cars chasing too few parking spaces, but the situation is more complicated than that. Sprague said the problem is at least partly caused by many people wanting to park next to their own doors where they work on campus. If everyone could realize that they cannot do this, then the problem would be simpler, she said.

William E. Wendt, director of transportation services, agrees with this. "More people would like to park near their doors than we'll ever be able to accommodate," said Wendt. "Many employees see Cornell as a factory that should provide free convenient parking for their workers. However if you look at any big urban center you will find that that's not the case with businesses and factories. People in cities are walking everywhere." He said that ev-

A visitor stops at one of the many traffic booths on the Cornell campus meant to ease the traffic flow. The driver is purchasing a visitor's permit to park in a visitor parking area on campus.
Parking spaces along Tower Road and Alumni Field are coveted spots by many Cornell drivers.

Every major university has similar problems. Wendt said that it costs a lot of money to build and maintain adequate parking, but parking is not a university’s main mission. “Money will probably go into new academic programs and services before it goes into parking,” said Wendt.

Student drivers add another dimension to the problem. “Students are given permits for parking around dorm areas then are expected to walk or take bus service to get deeper into campus,” said Sprague. Many students, however, will drive onto campus anyway and park in a reserved spot that a faculty or staff member has paid money to use. Often the result is an angry staff or faculty member and a parking ticket for the owner of the illegally parked car. Every month public safety gives out between 3,000 and 4,000 tickets for parking violations on campus. The fines attached to these tickets range from $12 to $50. Although not all of these tickets are issued to students, Sprague admitted that students cause the most trouble concerning parking. Another growing problem is the increase of parking permit fraud. Visitors to Cornell can stop at any one of the traffic booths on campus to buy a permit which allows them to park in one of the red visitor areas on campus. Around 200 visitors pass through the traffic booths each day to buy a permit ranging from $1 to $4. But many non-visitors have been forging their own permits and parking in the visitor areas free.

While many continue the search for legal or illegal parking on campus, there are others who have given up on it. “I never take my car to class,” said Stephanie Bush ’90. “I tried once or maybe a couple of times, but I had to go across campus to find a place to park and it was nowhere near where my classes were.” Since then Bush has found it easier to simply walk to class or take a campus bus from where she lives in Collegetown. She does not forget the trouble one goes through to try to park in a convenient spot on campus. “The places you can get a permit to park are very far away like O-lot near the vet school,” said Bush. “There really is no good place to park unless you park illegally. It also depends on when you go out. It’s bad if you try to find a spot around 7:30 in the morning because you compete with the morning crowd of students and professors who want a space too.” Wendt said he believes that parking problems on campus are relative to where one works or studies. “It seems that everyone gets to park on campus, but there is a certain pecking order when it comes to certain spots,” said Wendt.

For example, the most convenient parking spots around the College of Arts and Sciences are offered first to faculty and senior level staff. Then middle level managers get a chance at them and so on down the hierarchy. Wendt said he is looking for solutions to the parking problem that are as equitable as possible for all.

With the campus growing by one percent each year and increases occurring in staff size, new parking garages are being considered. The campus is limited to the amount of large mall-like parking lots it can build because these lots take up too much green space. Certain areas of green space like Libe slope and the areas around the gorges are found by many to be inappropriate for parking spaces. Parking garages will be able to accommodate more cars while taking up less space than a lot would. The A-lot, located on North Campus, can hold only about 600 cars, but the parking garage behind Schoellkopf Field uses much less land and can hold 700 cars. Current prospective sites for new parking garages include behind Sibley Hall, behind Sage Hall and Newman Lab, the current site of the Cornell Plantations service building and behind the law school.

Wendt is also trying to improve the traffic flow around the rim of campus while reducing it on streets that pass through heavy pedestrian traffic such as East Avenue and Tower Road. This will mean the eventual upgrading and extending of Campus Road and the elimination of parking along Tower Road.

Many of Wendt’s plans will be difficult to follow through with so many other large projects in a state of flux at Cornell. Wendt said that parking cannot begin to become a priority until the plans of surrounding projects are fully known. The parking garage behind Schoellkopf Field was planned out well because Wendt knew the project plans of the surrounding buildings and structures. He hopes to plan the next parking garage within the next year and to offer more options for people who want to park their cars at Cornell.

by Roderick Ventura ’90
MOST LARGE GROUPS OF PEOPLE have a coordinating or governing body for organization. The United States has the Congress, baseball has the commission and the undergraduates of the New York State College of Agriculture and Life Sciences have the Ag Council.

"What is the Ag Council?" a student asked as she passed the bulletin board that serves as a public display area for the group.

The Ag Council is a seven-member group elected every March by the entire CALS student body. "They are more or less a student council for the College of Agriculture and Life Sciences," said Dr. John Parks, assistant professor of animal science and one of the faculty advisors for the Council. Formed to maintain and improve the student life in the College, the Council sponsors many events on campus, including Ag Day, the Senior Barbecue, Lunch with the Dean and various study breaks throughout the year.

"Publicity is our biggest problem," said Jodean Robbins '89, communications coordinator. "Most people don't even know that the Ag Council exists."

The Ag Council has been around since the fall of 1985 when the Council was formed from its predecessor AgPac. AgPac was changed to the Ag Council mainly because student involvement was falling, according to Scott Weissmann '89, President of the Ag Council.

A much larger organization than the current Ag Council, AgPac was well known to the students because of its size. Students seemed to lose interest in AgPac, and membership declined in the fall of 1985. AgPac members felt the enrollment was down, so it was consolidated to a seven member officer council with representatives from the various agriculture clubs included," Weissmann said.

Now, as a seven-member council of officers, the Ag Council had to increase interest on campus and continue to effectively run all special events.

As a result the group has not ever had the chance to write a working constitution or bylaws in its four year history. A constitution had to be drafted. "We had no direction. Nothing saying who we were and what we are accomplishing," said Robbins.

"I had a two part goal for this year when I became president. The first was to draft and complete a constitution and a set of bylaws," Weissmann said.

According to Parks, the students did all of the decision making when drafting the constitution. "They needed to lay out, in very specific terms, how they would interact with the administration and how other clubs and organizations would interact with the council. The officers took it upon themselves to tie up the loose ends, and I think they have done a heck of a job."

Weissmann believes that this is the first step in making the Ag Council into an effective means of communicating with the student body and the administration. "We have had an incredibly successful year. All our activities this year have broken all records for attendance," Weissmann said. "Our study breaks have been really successful."

The Council sponsors milk and cookie study breaks during study week every semester. Last year they gave away 15 pounds of animal crackers. This year it went up to 45 pounds. "People are getting involved and that's been due in great deal to the communications co-coordinators," said Weissmann.

Publicity has been a difficult problem to solve. The Council's main advertising place is a bulletin board located in a well-travelled hallway, but because of traffic flow, it is too narrow to easily stop to read the information. "What I want to do is get that bulletin board moved out of the hallway to a place people can stop and look at it," Robbins said.

Although the placement of the board is a problem, Robbins believes that the overall result of publicity efforts has been successful. "We've tried to work on it this term with the 'Meet the Ag Council' study breaks, but we need to do more."

Now that his term is coming to a close, the second part of Weissmann's two part goal can be instituted. All of the officers, following the completion of their duties, will write reports concerning their offices, the problems that occurred and the procedures that were followed to complete their objectives.

"If the special events coordinator when organizing Ag Day says he had to talk to public safety and then maintenance at the straight [Willard Straight Hall], then that may help the next officer when they have the same job. The idea is to form a relationship between an officer and the previous officer," said Weissmann.

Parks believes that progress the Council has made over the last year has been good. "There has been an identity problem and I think that everyone has recognized it. I think this document will help to show people what the Ag Council is all about."

The strides the council has made during this year will affect and, hopefully, help future council members. "This is something that will carry on," said Robbins. "It's really the most important thing we've done in our term."

by Patricia Ann Froehlich '89
Creative Safety

WOULD YOU PUT YOUR HAND IN A mouse trap to gain a dollar? How about reaching into a rat trap for a five or into a fox trap for a fifty? If you were attending a talk given by John Pollock ’62, executive director of the New York State Rural Health and Safety Council, you could be asked these questions. Pollock asks audience volunteers to decide what they would do in a demonstration used to illustrate risk analysis and management in the work place.

This is just one example of the creative ways the Rural Health and Safety Council presents farm health and safety to its public. Pollock prefers to teach using audience participation. “It allows the audience to become actively involved in what is being taught,” said Pollock. In addition, Pollock also likes to use humor in his presentations. “You don’t have to teach safety in a somber way,” he said. “Some topics can be handled in a lighter manner while others are necessarily more serious.” The most important thing, however, is that people get the message and act on it later.

A number of programs and projects have been started since October, 1987, when the Council and Cornell’s College of Agriculture and Life Sciences joined to promote farm safety through educational programs and aids. Emphasis is given to finding creative ways to present what many find to be a dull subject.

One of the projects the Council is currently working on is a training video about the Federal Hazard Communication Standard. This law states that employees have a right to know about the hazards in the work place and how to manage them safely. This includes farms and farm employees as well. The video is designed to teach both management and employees the aspects of the law. This is crucial because the Occupational Safety and Health Administration (OSHA) has already cited farm employers for not complying with the standards.

Training is another aspect of safety that the Council is concerned about. Pollock said that the Council is working on a program to help family members understand the decisions they face if a loved one is injured in an accident. It is easy for emotions to inhibit judgement and rational thinking. Family members need to know how they can function in an effective way to help the victim by preparing for accident emergencies. Training will also include basic first-aid that can be applied before the arrival of rescue personnel. Although the training is designed for every member of the family, a primary target is women. The wife potentially faces aiding an injured husband and also her children. According to an article in the Council’s newspaper, although children spend much of their time in school and therefore are not on the farm on a full-time basis, they experience a greater number of accidents for the time they are exposed to the hazards. Because of this, special attention must be given to teaching supervision and child training to the parents.

Still in the first year with its own staff, the Council has had to deal with structural activities along with its new safety projects. A year ago, Pollock saw some specific goals that needed to be addressed right away. (Cornell Countryman, March, 1988) One of these goals was to hire a full-time staff of five. To date, the Council has two full-time employees: the executive director and an administrative assistant.

Fund raising is another activity that the Council spends a great deal of time on. Partial funding comes from the College of Agriculture and Life Sciences, which provides an office headquarters for the Council in the Department of Agricultural and Biological Engineering. Other funds come from members of the Council which range from agribusiness interests and insurance companies to individual farmers. Pollock travels quite extensively to elicit more funding. Each member is placed on the mailing list to receive the newsletter, RHSC (pronounced “risk”) Manager.

Over the past year, Pollock has received a fair amount of letters responding to the efforts of the Council. “All have been positive except for two letters,” said Pollock. “We like to think we are doing something right.”

by Gayla B. Pollock ’89
AND THEY ARE OFF. JUST AS FINE thoroughbreds spring from the starting gate so do at least 9,000 Cornell students early each spring semester. What is the big rush? That infamous word...HOUSING. However, something new is stirring this semester, something that will make many students' search for that perfect dwelling easier.

For the first time in Cornell's history, the University is providing a Roommate Matching Program. This program is organized by the Office of Off-Campus Life in the Dean of Students Office under the direction of Pamela Zinder '82, coordinator of off-campus life.

For a campus that houses only 40 percent of its students in University-owned housing, this service will undoubtedly be welcomed. Every year Cornell students confront a slew of problems in their search for affordable, acceptable housing. According to a Cornell Daily Sun article dated February 4, 1988, "...only 2.9 percent of all bedrooms available for rent in the county were vacant in 1987, far below the 5 percent needed for a competitive market." This puts pressure on students to start looking early in order to attain the most desirable housing. This problem is compounded further for students who don't have prospective living companions. Since rent for single bedroom apartments in Collegetown starts at around $300 it is often to a student's advantage to share housing.

For those students who already have housing but have a vacant bedroom available it is often hard to reach potential roommates. Although flyers and posters advertising such housing gain attention, often there aren't proper means for screening roommates. Cornell's roommate matching program allows students to interact on a one-to-one basis in an open and friendly atmosphere.

"It's a great idea, and we should have done it sooner," said Zinder. The matching service was the brain-child of Zinder, the Off-Campus Life Committee and Neff Casaburri, assistant dean of students for Greek and off-campus life. Zinder became aware of roommate matching after receiving a newsletter from the University of Western Michigan where roommate matching is sponsored every week. Plans for Cornell's service were drawn up last December and the first roommate match-up was held on January 16, 1989.

Approximately 25 students showed up in Barnes Hall for the service, and were greeted with refreshments and enthusiastic help from the Off-Campus Life volunteers.

The service caters to those students who are without prospective roommates and those who have vacant rooms available. Each student fills out a form stating their situation and then receives a numbered name tag. The forms are then posted for each participant to view. If a student needing housing finds an interesting and acceptable form of someone who is offering housing, then the first will go in search of the second student's numbered tag. A successful match will hopefully ensue.

As Jean Tang '91 and Margie Gurga-
Three Professors Named as Fulbright Scholars

Three professors from the College of Agriculture and Life Sciences were named Fulbright Scholars to do research or lecture abroad during the 1988-89 academic year. In addition, one visiting fellow with affiliation to the College received a Fulbright award.

Nearly 1,000 Americans received the 1988-89 awards in the program established by Congress in 1946.

The Fulbright Scholars from the College of Agriculture include:

Timothy J. Fahey, assistant professor, Department of Natural Resources, to conduct research on the fertility and acidification in disturbed landscapes at the Institute of Terrestrial Ecology, Merthyr Research Station, Cumbria, United Kingdom.

Penelope A. Kukuk, visiting fellow, Department of Entomology, to conduct research on bee behavior at the University of New South Wales, Sydney, Australia.

Ronald Elroy Ostman, associate professor, Department of Communication, to lecture in the development and communication research project at the University of Poona, Pune, India.

M.A. Rao, professor, Department of Food Science and Technology, to lecture and conduct research on food processing and engineering at Portuguese Catholic University, Porto, Portugal.

George Casella, an associate professor of statistics in the Biometrics Unit of the Section of Plant Breeding and Biometry, has been elected a fellow of both the American Statistical Association, and the Institute of Mathematical Statistics.

Frederick B. Hutt, a professor emeritus of animal genetics, along with one of his former graduate students Robb S. Gowe PhD '49, are among the first 25 individuals selected to the International Poultry Hall of Fame.

Hutt, who has continued his research since his retirement in 1965, is recognized worldwide for his work on heredity in domestic animals, particularly fowl, genetic resistance to disease, lethal genes, hereditary defects, and genetic differences in nutritional requirements.

Gowe is now director of research at Shaver Poultry Breeding Farms Ltd., in Ontario.

Douglas A. Haith, professor of agricultural engineering, is one of two recipients of the American Society of Civil Engineers' 1988 Wesley W. Horner Award for his achievements in environmental engineering. Susan S. Kaufman, an environmental engineer with a Massachusetts firm also received the Horner Award for her paper on disposal of municipal sewage treatment plant sludge.

Scott Named as Research Vice President

Norman R. Scott PhD '62, director of the Office of Research of the College of Agriculture and Life Sciences and director of the Cornell Experiment Station, has been named as the vice president for research and advanced studies, subject to approval by the Board of Trustees.

Scott will begin the position on July 1, 1989, taking over for Joseph M. Ballantyne, who will return to teaching and research in electrical engineering after five years as vice president.

Scott will oversee the administration of the research programs and policies, said Provost Robert Barker.

Leonard Weinstein has been named director of the Ecosystems Research Center at Cornell. Former director Robert W. Howarth will continue a research association with the center.

Funded by the Environmental Protection Agency, The Ecosystems Research Center was founded in 1980 to assess and evaluate knowledge on whole biological communities and ecosystems, and to investigate the applicability of ecological principles to environmental regulation and management.

New and Improved Raspberry Developed in Geneva

A new, larger fall-fruiting raspberry hybrid has been introduced by Cornell University's New York State Agricultural Experiment Station in Geneva.

RUBY (trademarked), is the result of a cross between “Heritage”, perhaps the most widely grown raspberry in the world, and “Titan.” Both parent varieties are products of New York state breeding programs. “Heritage” contributes the fall fruiting characteristic, while “Titan” contributes the larger size attribute. RUBY is described by scientist Dr. John C. Sanford as averaging “half again as large as Heritage.”

“We are pleased that this variety has reached commercial growers as quickly as it has,” said Sanford who was assisted in the breeding effort by research support specialists Kevin Maloney and Jack Reich. “The testing was conducted in several geographic areas. This is unquestionably going to be a useful commercial berry, especially in areas such as California,” Sanford said.
Helping the Food Industry

THE NOVEMBER 1988 OPENING OF the Stocking Hall addition has brought the food science department its much needed space. According to John Brown, the manager of the Food Processing and Development Lab, "Cornell was behind other schools in food science training and research because of the department's inadequate space.

Food processing labs at other schools have 15,000 to 20,000 square feet of space while Cornell University's lab had a mere 2,800 square feet. The new addition of 30,000 square feet to Stocking Hall allows Cornell to modernize its teaching, research and extension facilities.

Cornell hired Brown to manage the new food processing and development lab. He began his position as manager in July, 1988, after leaving Archer Daniels Midland Company, one of the largest manufacturers of food and feed ingredients in the world. Brown said that the department's faculty and staff were pleased with the new classrooms and the huge teaching lab. "Some [faculty] have been involved for twenty years in the planning of the new laboratory," Brown said. The $4 million project was entirely funded by the state of New York (SUNY). Cornell's food science department prepares both undergraduate and graduate students for the food industry. The state will benefit from Cornell's improvements because much of the department's research is concerned with problems affecting New York's dairy and food industries.

"Cornell specializes its research in four areas of expertise," Brown said. These four areas are separation processing, food engineering, packaging technology and extrusion technology. Brown said, "The University's mission is to help the food industry by making its knowledge public."

Food science majors at Cornell participate in undergraduate and graduate teaching and research in state-of-the-art facilities provided by the new building. Opportunities to work in the dairy plant include processing the dairy products, packaging them for distribution and working in the Cornell Dairy Store. The Dairy Store has moved to its permanent site in the new addition. The food science department primarily works in areas of dairy research where faculty, staff and students create new products for New York.

In conclusion, Brown said he wanted "to emphasize the greater impact Cornell can now make on the food industry with its new facilities."

by Ingrid K. Storer '89

John Brown, the manager of the Food Processing and Development Lab, works with the new extruding machine.
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**About the Issue**

Water. It is odorless, colorless and tasteless. Yet it affects us all in innumerable ways. Water falls from the clouds and we call it rain. This rain feeds all life on Earth. Water collects and we call it stream, river, lake, or ocean. These bodies of water dominate the world's geography. Water cuts through rock and we call it natural beauty. Water is harnessed and we call it hydropower. Water is all of these things and more. However, when water is polluted, we call it irresponsible. This abuse is evident in the acid rain that kills our trees and the plastics in the ocean that kill our fish. We devote this issue to the wonderful, beautiful . . . and harmful natures of water.
WATER WORLDS

WHAT DO THE 100 YEAR OLD ART
of Japanese fish printing and a new Cornell Cooperative Extension 4-H program publication exploring water and natural resources have in common? They share a philosophy that awareness and understanding can bring forth a better appreciation for natural beauty and variety.

The art of Japanese fish printing, gyotaku, has allowed fishermen to acquire awareness and information on fish biology and physiology by catching sportfish and making prints of their bodies. The new 4-H project publication, Water Worlds, is part of a Natural Resources 4-H Development Program designed to increase a similar awareness among youth of resources in natural water worlds.

By involving nine to twelve year olds in activities that examine water depth, temperature, water clarity and biological parts of water environments, the overall goal of Water Worlds is to create an awareness of aquatic environments. Marianne Krasny ’74, a developer of the Water Worlds publications in the Department of Natural Resources, said, “Natural resources is our first concern with Water Worlds. We want the youth to at least think about their relationship to or stewardship with the environment. Awareness is the key to future action.”

Krasny said one of the driving forces behind developing Water Worlds was to create publications to meet a younger 4-H audience. Krasny said a new age group in 4-H programming predominates today, compared to ten to fifteen years ago, due to increased participation by urban and suburban youth. 4-H activities no longer seem to be limited to just rural communities, Krasny said, “4-H traditions are in rural areas, but today when we develop new projects such as Water Worlds, we must meet urban area needs too. The mission of Cooperative Extension is to meet the needs of people in all of New York state.”

In 1987 over 83,000 contacts with youth were made through the Natural Resources 4-H Development Program in New York state. The potential for Water Worlds to reach this audience of statewide geographic locations is great. Krasny said an advantage to Water Worlds experiments is that they can be carried out in almost any water environment. “The experiments are designed so that if you can drop a thermometer into a rural lake or stream, you can also drop it off a city pier.”

Greg Neal, an Oswego County 4-H Extension Agent, said Water Worlds is instructionally unique because it is written in a short and direct format. He said a motivating consideration in its creation was based on the belief that most 4-H leaders today do not have a lot of extra time. They do not have much time for club project preparation and must have no background in natural resources. Neal called the Water Worlds format of short introductions and series of one page activities a “cookbook form for leaders.” He said, “The natural resources projects already in existence were not useful for 4-H leaders. They assumed a higher level of understanding about natural resources than what the leaders had. Too much preparation and manipulation was needed to use them easily with clubs.”

The Water Worlds project publications were tested pilot in the summer of 1988 at a New York camp. Counselors who were college students were to test the publications’ format and Water World activities in a typical youth camp setting. Neal said the pilot project was a real test as to whether the Water Worlds publication would come through in its easy-to-follow format. “A camp counselor who is an accounting student may be told to go and teach about water bugs. He or she probably has no background in natural resources and has to get the basic knowledge to carry out the activities in a minimal amount of time.”

Neal said to evaluate the success of Water Worlds, counselors were given evaluation forms on its effectiveness. To get feedback from the Water Worlds participants themselves, campers were given pre-tests and post-tests. During the first week of March 1989 4-H leaders statewide received copies of Water Worlds to incorporate into their club activities.

Neal said Water Worlds is only one publication project trying to bridge the need for more natural resource education in New York state. “We’re seeing a resurgence of concern and interest in our natural resources today. People working with youth need materials that are more usable and accessible and designed for younger audiences.”

by Terese M. Angelastro ’90
A South American
ADVENTURE

WITH THREE THINGS YOU CAN GO anywhere. First, "Be open to the experience. Let it happen. Then, you need iodine, for purifying water. You also need a good camera," Francesca Grifo advised over her cup of coffee. With her openness, iodine, camera, and John Brooks' South American Handbook, Grifo searched about South America from October 1987 to June 1988 for valuable plant specimens.

Grifo, a graduate student in the L. H. Bailey Hortorium, sat in her small office, accompanied by her windowsill plants. A large Gaugin poster dominated one wall. "I like Gaugin's work. He had an amazing life. Somerset Maugham's The Moon and Sixpence, a supposed biography of his life, intrigued me. I read it in South America. I read a lot in South America. After a while, you get crazy looking for English books." She beamed when speaking about South America. Thousands of memories came to life behind her sparkling black eyes. The stories emerged.

Grifo started her journey when she landed in Ecuador. "Within five days of starting my trip, I was calling myself the five kingdom zoo: I had bacterial and fungal infections, worms, amoeba parasites and a viral infection," Grifo remembered. Not realizing how sick she was, Grifo continued into remote areas of Ecuador. Finding a small clinic, she tried to explain her condition. "I spoke no Spanish at the time and was flipping through my Spanish dictionary, trying to look up the word for 'blood.'" Not receiving adequate medical care, Grifo pushed on for six days. "The parasites felt like I was trying to digest broken glass. I lived on orange soda and lost 22 pounds. The truck driver I hired, Marco, was so good to me. He carried my bags and helped me press plants." Upon reaching the city of Quito, Grifo received medical attention at last and continued her journey.

From Ecuador, she went on to Chile, where she met up with a biologist, his wife and one of his students. "Christmas would have been awful without them," Grifo said. By New Year's Eve, Grifo and her three companions reached Tucuman, Argentina. "Everything was closed because people stay home there for New Year's Eve and we had to be in the hotel by nine o'clock, when they locked the doors." Without a party to go to, Grifo and her student companion bought fireworks and champagne. She said, "We went up on the roof and played Argentine tangos. We tangoed on the roof! It was one of my best New Year's Eves ever!"

In Argentina, Grifo met up with a horse she would rather forget. "I wanted to go into the forest to find a species I was looking for. At 5:30 in the morning, I got on my horse. It bolted and took off. I was terrified." The horse continued to misbehave the rest of the day. Grifo said, "The minute we would get to the pastures on our mountain climb, the horse would just take off." Grifo and her companions then became lost in the fog. She added, "It was the most incredible day. I had not ridden for a while and was so sore for the next two weeks." The party did not get back until 1:00 in the morning. At this time, one of the party members, seventeen-year-old Javier Jimenez, suggested they walk to his parents' house where she could catch a bus. Grifo remembered, "His mother and father came down, cooked us a meal and showed me the house. His mother used her little bit of English. They got out the car and drove me back to the hotel. They taught me to be more generous in my own life when I have the chance!"

From Argentina, Grifo pushed on alone. She traveled through Bolivia, then Brazil. Grifo explained, "Brazil was difficult. When I finally learned Spanish, I had to speak Portuguese. Grifo was in Rio de Janeiro for Carnival, where she met up with two 'crazy Brits'. She said, 'In South America you never really travel alone unless you want to. It's easy to meet people from all over the world. There are always interesting people, for it takes someone half nuts in the head to go there.' In Brazil she was able to see Iguazu Falls, along with other examples of natural beauty. She said, 'Brazil is so diverse and beautiful a country. One can never ever really summarize it.' Grifo found that she was able to eat anything she wanted in Brazil. She explained, 'Like Argentina and Chile, the standard of living is high. In contrast, the poverty is so prevalent in Ecuador, Bolivia and Peru.'

Grifo experienced this poverty in the next leg of her journey. Grifo recounted a memory of Peru, "We would be eating and little kids would be selling..."
postcards. I could not resist them and bought more postcards than I needed. I invited the six kids in and bought them bowls of soup for dinner. You should have seen the way they ate. They were hungry. The poverty is no joke. No act. It's very real."

Nearing the end of her research in the continent, Grifo revisited Ecuador. Here she retraced the steps of explorers who were collecting tree specimens in the 1800s. Looking for the Hacienda Tamac, Grifo was helped by a little girl who knew that it did not exist anymore. The girl pointed her to the present site of the old hacienda. It was getting late by the time Grifo reached her destination. Needing a place to stay for the night, she knocked on a door. Grifo asked the owners of the house, "Can I sleep on your porch?" They responded by cleaning out a bedroom and cooking her dinner. Grifo explained, "These people had nothing. They had a little shack and a little subsistence crop. Yet they gave me a meal. They were so hungry and interested in me. They have incredible personal dignity." On her departure Grifo gave the husband her Swiss army knife, which pleased him.

The following day Grifo found not only her tree, but also flea bites all over her body. She said, "I had 143 flea bites just from my wrist to my elbow. I was miserable for days."

Grifo ended her South American venture in Colombia. She noted, "In Bogota a radical group set fire to four buses on the university campus. They evacuated us all." She added, "There was a constant military presence. There were kids with machine guns on every corner."

Contrasting this dreary scene are the breathtaking sites Grifo witnessed while in South America. One of her favorite sights of the continent is Macchu Picchu. Grifo stated, "I am a ruins person. I got to see Macchu Picchu at dawn on Easter morning. The ruins are on this table mountain which drops hundreds of feet on all sides." She continued, "I will never forget the mist and the incredible rainbows."

Grifo's research venture, funded by a World Wildlife/Garden Club of America scholarship in tropical botany, proved to be a very positive experience in her life. It enhanced her feelings that "We really need to pay attention to the urgency of preserving the environment. That's why I am in this line of work and why I will stay in it."

In addition, the South American adventure gave her confidence. Grifo had endured illness and dangerous travel conditions on slippery, muddy, mountain roads in quest of her plant specimens. Grifo explained, "Before the trip I did not think of myself as gutsy or strong—that I could survive the trip and still have a good time."

Finally, as Grifo stated simply, "I saw beautiful places and wonderful people."
"THE HIGHEST AND BEST FORM OF efficiency is the spontaneous cooperation of a free people." Back in 1921, Woodrow Wilson probably didn't have Cornell University on his mind as he uttered these words in deference to the first World War. Nevertheless, the fruits of the former president's timeless advice can be seen in the symbiotic relationship that has developed between Cornell University and the local state parks over the years.

In a nutshell, Cornell needs the parks, and the parks need the University. Accordingly, the two institutions feed off each other's resources and offerings. "Instead, we take our basic rock-climbing groups to upper Buttermilk Falls to the masonry dam where the pieces of rock have been cemented. The rock is stable and therefore ideal for climbing."

The University's athletic department utilizes the parks for backpacking, hiking and cross-country skiing, as well. "As a wilderness program, we're looking for wilderness," Tillemans explained. "The state parks and forests are maintained as nature areas, so they're ideal for our purposes. We also like to spread out, go to a variety of areas. Without the parks, our program would get very routine."

In addition to issuing permits for athletic activities, the Finger Lakes State Park Recreation and Historic Preservation Region grants access to various researchers to explore and study the facilities.

While some parks visitors play, others study. "Although there are no ongoing research programs, we do frequently grant permits to grad students, on a case by case basis," said Thomas Gell, assistant regional director at the Department of Parks and Recreation.

"One year, we had some engineering students design and build a shelter for the local Y.M.C.A. Other times, graduate students came down to study birds and trees for their theses," Gell explained. "We've had Cornell people come do master's theses on wildlife inventories, natural history surveys, and studies of plant communities," said Tony Ingraham '69, conservation educator at Taughannock Falls State Park.

Cornell returns these favors in many ways. "The service fraternity Alpha Phi Omega participates in special programs every year like our Halloween party and Winterfest," Ingraham said.

Another Cornell resource the parks frequently tap is the University's steady supply of students. When the parks offices are in need of volunteer student workers, they usually contact CIVITAS, the University's volunteer network.

"CIVITAS volunteers provide administrative help, assist in coordinating recreation programs, help organize special events and help in environmental education," said Mary McGinnis, CIVITAS coordinator.

Though the relationship between Cornell and the parks is a strong one, some note the opportunity for further interaction.

"Cornell's use of the parks is certainly more athletic than academic," said Andrew R. Mazzella, regional director of the Finger Lakes State Park Recreation and Historic Preservation Region.

"Other universities have conducted studies here on birds, wildlife, vegetation. I would definitely say there are some opportunities and voids in Cornell's research involvement with the parks. But, I guess they use us as needed, and vice versa," Mazzella noted.

It's a good thing, because two heads are definitely better than one. ■

by L. T. Ryan '90

Dan Tillemans, Director of Outdoor Education at Cornell, getting a piece of the action.
IT STILL DIDN'T QUITE LOOK FINISHED. One week before the new Statler Hotel would open for its first paying guests on March 17, 1989 construction continued at full pace. But, if you walked through the doors to take a peek, you caught a glimpse of the shining floor and the majestic staircase leading to the Grand Ballroom, and you realized what a magnificent transformation had taken place.

Officially named the Statler Hotel and J. Willard Marriott Executive Education Center, the hotel differs primarily from the old Statler Inn in its size and purpose. The old 51-room Statler Inn, which was demolished in November 1986, functioned as an inn for campus guests while offering a management training facility for students of Cornell University's School of Hotel Administration. In addition to these commitments, the new 150-room luxury hotel offers continuing education for executives and succeeds in providing state of the art conference center facilities for university groups or visiting corporations.

The J. Willard Marriott Executive Education Center is the most significant addition to the new Statler. Spanning the entire first floor of the nine-story hotel, the Marriott Center features a 91-seat amphitheater with adjoining meeting rooms. At the disposal of the guests holding conferences in the complex are audiovisual and computer support services, teleconferencing capabilities and electronic mail service to keep visiting executives in touch with their home offices.

Four conference study rooms serve as evening study areas for overnight conference participants; these rooms are equipped with a computer area. Statler will even provide VCR's if you want to review a videotape of that meeting you recorded in the Marriott Center.

The hotel was designed in 1985 by The Architects Collaborative (TAG) of Boston, while Ken Hurd, Associates designed the interior. Lehrer, McGovern, Bovis Inc began construction in January 1987. The $39 million project was made possible through donations from alumni and a number of supportive hospitality industries.

The Statler Hotel was originally scheduled to open in January 1989. However, due to the discovery in May 1988 of hairline fractures in concrete beams, construction was halted for about a week. The problem was basically cosmetic, and was corrected.

"The opening on March 17 was what we called a 'soft opening'. It was a 'get up and running' opening, just to get every detail checked," said Mary L. Graf, Director of Public Relations for the Statler.

Although the Statler opened to guests March 17, the grand opening began April 10 and culminated April 14 and 15. A university tradition continued when the hotel school's 64th annual Hotel Ezra Cornell also occurred that weekend. During Hotel Ezra Cornell, hotel school students run the Statler Hotel for the entire weekend. The Grand Gala Opening celebration and ceremonies happened April 13 with a dinner for the major donors and ribbon-cutting ceremonies took place April 14.

But enough of that, what about food? Guests may dine in Banfi's, Statler's own dining room. Or, they may opt for a more casual atmosphere and eat at The Terrace Restaurant which overlooks a glorious view of the Cornell campus.

Graf refers to the Statler as a "teaching hotel". Since certain aspects of the hospitality industry cannot be taught in the classroom, curriculum is supplemented with training and work experience at the Statler. Now with the Marriott Center annex, for the first time, faculty members will work in management positions for the hotel.

Acclaimed as the first school of hospitality management in the nation, Cornell's School of Hotel Administration lives up to the motto of the late J. Willard Marriott, "Success is never final," he said.

The April 1989 grand opening of the Statler Hotel and J. Willard Marriott Executive Education Center initiates an important element in the education and training of the future leaders of the hospitality industry.

by Margaret Ramírez '90
by Elizabeth J. Hujsak '90

ON A HOT SUNNY SUMMER DAY, you jump in your car and head for the beach. Even before you see the ocean, you can smell the salt in the air. You cannot wait to wriggle your toes in the warm soft sand, to doze under the shining sun, and to splash in the brisk thunderous surf. Upon arrival, you lug your gear to a carefully selected spot, but before you can lay your things down you have to clear away the garbage.

Wouldn't it be nice if we could clean up after ourselves? The white bits that speckle the beach, upon closer inspection, are six-pack rings, cups, and baggies. There is a very good chance that this trash will wash away with the waves, but it will be replaced with more trash washing in with the waves. Strange little plastic pellets wash up in the surf, and even more strange is the appearance of plastic trash bags. Why would someone throw away a trash bag, unused?

Well, it is more likely that the trash bag did hold trash, but broke open after it was thrown overboard or after it was mistaken for a jellyfish, some sea turtles' favorite food. "This is not a problem you can blame on someone else. The finger has to be pointed in the mirror," said Dr. John B. Heiser PhD '81, Director of the Shoals Marine Laboratory in Maine and senior lecturer in the Section of Ecology and Systematics of the Division of Biological Sciences. With the relatively long life of plastic—which makes it so popular with us—disposing of plastic has become a world-wide problem, Heiser said.

Casually dropping a broken styrofoam cup into the river may be innocent enough, but thousands of rivers deposit their burdens in the ocean, where, according to the Center for Environmental Education, that cup will join the 14 billion pounds of wastes discarded in the ocean every year.

There are no regulations regarding the disposal of wastes in international waters. "Even if there were regulations, there would be no way to enforce them," Heiser said.

Today, fishing nets made with tough plastic more durable than the ropes of old create a new problem when they are lost or discarded in the ocean. "We call this 'ghost fishing' because the nets continue to fish. They do not stop fishing, and the rotting fish in the nets will attract predatory fish to the area," Heiser said.

Animals ranging in variety from seabirds diving after food to whales can get caught in these nets. A net may not stop a whale or dolphin immediately, the constant dragging wears the animal down, and rope burns cut through the hide, he said. "There's also the chance that the nets will catch on the ocean floor, drowning the whale, or dolphin."

Trash bags thrown over the side or left on the beach can be mistaken for jellyfish by animals that normally feed on them, such as some species of turtles. Since the plastic cannot be digested, it remains in the turtle's system. If the turtle eats too much plastic, its stomach will become impacted. "When the gut is full of plastic, the sea turtle can't get any real food past it," Heiser said.

The U.S. Navy was also among those that threw their trash overboard once outside U.S. waters. Environmentalists are more hopeful now that the U.S. has ratified Optional Annex V, an international attempt to prohibit waste disposal at sea.

Tiny little pellets of plastic, the most common form in which to transport raw plastic, look like plankton to some fish, and like fish eggs to some sea birds, with the same terrible results for these animals as the sea turtles. These pellets usually reach the sea with the help of the rivers near plastic-manufacturing factories.

Six-pack rings will slip around an animal's neck (fish, birds, and the larger mammals), acting very much like a hangman's noose.

Heiser said that people are becoming more aware of the problem and are trying to remedy it. "In Europe, some countries recycle their plastic, although the result is like the chewing gum on the bottom of the seat. There's very little that you can do with it," Heiser said. Another possible solution is the manufacture of biodegradable plastic, but the process is more expensive. "Because no one wants to take on the costs of recycling or manufacturing biodegradable plastic, the only organization that can do anything is the government," said Heiser. He would like to see the government pass regulations requiring people and businesses to find viable, less environmentally hazardous substitutes for plastic.

Like many problems with pollution, it is difficult to see how it will affect us. According to the Center for Environmental Education, boaters and fishermen are more often attributing fouled engines and propellers to plastics in the ocean, and plastic has become the most common man-made object sighted at sea. Heiser estimated that one-third of everyone's trash is plastic. "And that's the stuff that lasts the longest," he said. Paper, banana peels, and other wastes are much more biodegradable than plastic.

"While it's almost impossible to prevent ships from throwing their garbage overboard, if they would just throw over the garbage and not tie it up in
plastic—the animals would love that,” Heiser said.

Paper instead of plastic at the grocery store is not the total solution, Heiser pointed out, because recycling is an unrefined process. But it is a start. Heiser suggested that people try to use as little plastic as possible, although he admitted it would be difficult to completely stop using plastic.

Other suggestions from the Center for Environmental Education, which has been making a huge effort to raise people’s awareness of this problem:

* When out on a boat do not discard the trash overboard.
* Encourage the caretakers of the local beaches to have trash disposal in convenient locations.
* Pick up trash when you see it floating in the water, or blowing in the wind.
* Tell others about the problem.
* Participate in local clean-up programs. (At Cornell, several fraternities and sororities have a gorge clean-up drive in the spring.)

So, go to the beach, enjoy yourself, and for the price of bending down to pick up that styrofoam cup, you can have the pleasure of knowing that you’ve just prevented a fish from mistaking it for plankton or a bird for fish eggs. The pleasure is double if you help others or if you pick up what was left behind.

Discarded fishing nets often continue to entangle fish in what is termed “ghost fishing.” It’s hard to determine how many nets are still drifting in the oceans.
by Don Cameron '89

STEPPING INTO GENE GERMAN'S office in Warren Hall is like stepping into a supermarket and a souvenir shop at the same time. Kellogg's cereal boxes line the top shelf of a bookcase. Lifesize cardboard models of Bartles and Jaymes peer out from behind a desk. Ice cream and soda containers of every imaginable style are distributed throughout the room. A Detroit Tigers cap hangs on a corner coat rack, and a Cornell basketball program lies next to a marketing textbook on a large sofa.

As a second-year faculty adviser to the Cornell men's hockey program, and associate professor of marketing in the Department of Agricultural Economics, German MS '59, PhD '78, is responsible for making athletics and academics compatible, but realizes where priorities stand.

"All student-athletes who come to Cornell have an understanding that academics is number one, that studies come first," German said. "Even though they get excited and put in a lot of effort with sports, very few of them even consider professional sports. So they're really here for one reason—to get a top-notch education."

One of the first things German and head coach Brian McCutcheon '71 did was to establish a required study table for freshmen on the squad, as well as any other skaters who are experiencing academic difficulties. The study table meets three nights a week, and has been very successful, according to German. "During the season the travel is very demanding on all athletes. We want to catch people before they really begin to slip," he added.

Like the most popular athletes, German has attracted considerable popularity himself in the College of Agriculture and Life Sciences. His introductory marketing course entices hundreds of students each semester.

German's popularity was best exemplified several years ago, when the senior class selected him "Outstanding Professor" in the College for the 1983-1984 academic year. "It's the ultimate award a professor looks forward to, being recognized by students for doing what you're supposed to be doing," he said. "I had no idea I was going to receive the award. It was overwhelming. I teach some large classes, and I enjoy that, but this absolutely caught me off guard. I was at such a surprise. I was at a loss for words."

Normally, German has little trouble communicating ideas to large groups. "His lecture style is quite relaxed," said teaching assistant David Tardif-Douglas MS '86. "He intermixes both serious and not-so-serious topics. I think the key ingredient is that he really likes students. He maintains a good rapport with them, and the key to that relationship is he respects students perhaps more than many other professors do. Students realize that very quickly, right from the first class."

In addition to his introductory marketing course, German teaches senior-level courses in food merchandising and food industry management. "All are fun and interesting courses to teach," he agreed. "One of the things that makes them so interesting is that these courses—unlike many science and economic courses—are very dynamic. You can't even use last year's examples, because you have to stay on the leading edge of marketing developments."

The Battle Creek, Michigan native has had no difficulty keeping up with the latest trends in the food marketing world, partly because he helps create those trends through his extensive research experience. With a Michigan State University bachelor's degree in economics and ten years of industry experience under his belt, German came to Cornell as a department administrator in 1964. Fourteen years later he earned his PhD in marketing from Cornell, and accepted a faculty appointment in the same year. In 1984 German spent three months working with major food retailers, wholesalers, and manufacturers in Japan. The following year, he conducted consumer market and profitability studies for Safeway Stores in California.

In addition to co-authoring a food merchandising textbook and contributing countless articles to trade magazines, German has served on a number of industry advisory groups, including work for Hallmark Cards, Nestlé, Ragú Foods, and Canandaigua Wines. He has also spent considerable time and effort with extension activities, ranging from serving as keynote speaker for the Eastern Frozen Foods Association convention, to giving presentations on cheese retailing, and conducting seminars on food marketing methods for the U.S. Army Commissary. German has also found time to serve as an advisory board member of the Alfred Agricultural and Technical Food Distribution Program, and as chairman of the Planning Board in Dryden.

While Gene German certainly has had an influence locally, a quick scan of his office reveals an even broader, international influence. On the highest shelf in his office stands a box of Kellogg's Choco-Flakes cereal, a package designed by one of German's former students at Cornell. Though the product is only available in Guatemala, German has one box ready to be sampled.

But for someone who seemingly has time for a tremendously diverse array of activities, German admits that sampling this cereal is one thing he may never find the time for.
TWENTY STUDENTS WALK ONTO the football field. Some are carrying dots of clay atop the heads of pins while others carry balls. One person carries a round, yellow balloon. They then proceed to line up with each person at a greater distance from the previous one until they have spanned the entire field. These students are not getting ready to play an unusual type of ballgame but are modeling the solar system—to scale.

This is one of the activities in the education course taught by Dr. Verne Rockcastle PhD '55. Entitled "Our Physical Environment," the course looks at teaching in a unique manner. Rockcastle uses a "hands-on" method of teaching. Actually, he does not really teach but allows the students to experiment and explore ideas thus teaching themselves.

But why trudge all the way to the football field when you can just look in a textbook to see the solar system model? "Drawings in a textbook never get it right so people have misconceptions about the real shape," said Aisling Cusack '89 who is taking the course during the spring '89 semester. "Doing the activity gives you a much better idea."

Rockcastle started teaching the course in 1968 because he was concerned that his students did not have an understanding of basic physics. "They had taken biology and chemistry and I felt they shouldn't leave Cornell without knowing some physics as well." Taught mainly to graduate students when the course began, Rockcastle found he could spend a whole day on a single concept. "We tried to see how we could devise neat ways of looking at a problem."

The concepts he tries to explain fall under many different topics from electricity and magnetism to basic photography to environmental matters such as watersheds. Rockcastle chooses topics that he feels are not adequately covered in textbooks and those that would "appeal to a wide audience of lay consumers—the people Cornell grads will deal with."

The class meets once a week for three hours. During this time, students get to make one-stringed musical instruments, generate static charges, raise a table with plastic baggies and straws and time the speed of leaves floating down a stream. But this is more than a college version of "Mr. Wizard." For those students who have trouble understanding science, the concepts are made understandable. For the ones who have a good handle on science, they are introduced to new ways of explaining old concepts.

What inspired Rockcastle to approach science from a hands-on angle? When Sputnik went up, the country went crazy. All of a sudden, the United States was falling behind in the sciences. Teachers started asking for help and Rockcastle was there with an answer. He had already been writing the "Cornell Science Leaflet," which contained hands-on suggestions for teaching many science topics in biology, physical and earth sciences. He decided to rework them into a textbook for elementary schools.

Since American schools would not use the material until it had been completed through sixth grade, Rockcastle tested his program in Quebec using a French text. The first English edition appeared in 1972 and was titled STEM: Space, Time, Energy, Matter. The last edition, 1984, is still being used. Rockcastle estimated that about three million children have been introduced to science through this experiential approach.

Rockcastle would like to see the new crop of science teachers using a more hands-on style. Jennifer Desbois '90 is interested in becoming a science teacher and so decided to take Rockcastle's course during the fall '88 term. She had previously had little practical experience teaching the lower level sciences. "I learned how to relate teaching experiences to peers and children," Desbois said. "This style is an applied and real world method and is preferable if you want to teach."

Although retired, Rockcastle continues to teach this one course as well as travel around the country to different schools. "I am a firm believer in science being taught using a direct and continuing application to everyday life. If it doesn't, it will be forgotten and probably wasn't meaningful to begin with."

Perhaps some day every child will have the opportunity to experience science, not just be tested on their reading about it. But until then, there are a handful of students in an education class in the College of Agriculture and Life Sciences who are being taught to understand why Venus cannot be seen in the night sky.
CASCADILLA GORGE, NAMED AFTER its many cascades, descends some 350 feet from behind Cornell's engineering quad to Treman's Triangle on Linn Street in downtown Ithaca. The gorge has always made an impression on those spending time in Ithaca. Ernest Hasselfeldt, class of 1897, wrote in his memoirs about a "wooden chute for dumping garbage and refuse into the beautiful Cascadilla Gorge." Hasselfeldt recalled how a group of mischievous students burned down the chute while blocking the Fire Department's attempts to put out the flames.

Since the turn of the century, though, there has been an emphasis on preserving the nature within Cascadilla Gorge and on venturing into its lower levels. In 1915 Charles Lowrie wrote a proposal for creating trails within the gorge in which he pointed out that, "The unsurpassed scenery which can be viewed from the lower levels has only been a sealed book."

Robert H. Treman, class of 1878, and Henry Sackett, class of 1875—both Cornell Trustees—profundly influenced Cascadilla Gorge. During the first quarter of this century, Treman donated land in and around the gorge to the University. One of these donations, located at the base of the gorge, had a house on it that Treman demolished because it blocked the view. This property is now a park called Treman's Triangle. Treman gave money to Cornell for maintaining the gorge as a natural area to be enjoyed by the public.

Treman encouraged Sackett to join him in donating gorge land and money to the University. Sackett was happy to do so. Sackett wrote that he hoped to provide for the development of many natural areas around campus, including Cascadilla Gorge. It was Sackett's wish that "Every member of the Cornell University community, and particularly everyone who matriculates and studies there as an undergraduate, will not only come to love and enjoy those beauties...but will carry through after days their memory and spiritual influence." Funds donated by Treman and Sackett created endowments for the care of Cascadilla Gorge.

The main changes brought about by these funds are the paths that allow visitors to safely explore the gorge. Many people believe that the original Cascadilla Gorge trails were built by the Civilian Conservation Corps as part of the New Deal. This impression is due to the fact that the Conservation Corps constructed many of the gorge trails in the Ithaca area. However, local workers built the trails in 1927.

Unfortunately, the paths between Treman's Triangle and College Avenue were partly washed away by heavy rains in the early 1980s. Goldwin Smith Walk, which extends above College Avenue to the old women's athletic fields (currently tennis courts) has remained open, but the lower paths have had to remain closed until the interest earned from their endowments could pay for most of the repairs.

In the fall of 1988, the University masons repaired unsafe portions of the trails, particularly the stairs leading into the gorge below the College Avenue bridge. Hal Martin, arboretum manager, hopes to open the lower trails in time for commencement. "It all depends on the weather," he explained. "If we have a lot of rain, it might be later."

Martin said that the University masons have done a "wonderful job," and he said that repairing the stairs was muddy work. Gorge trails and stairs require unusual construction methods. The staircase is rooted in a large block of concrete which was described as "going nowhere," by John Reddington, Cornell Plantations Project Coordinator. To put in the steps, the crew cut into the shale at the side of the gorge until reaching solid rock. The crew put metal bars into the rock to securely an-

by Tonya Joy Byard '89
The Cascadilla gorge trail near the Stewart Avenue bridge should open again before late summer, 1989.

number of rare plants grow in the gorge, and it houses many animals.

The Cornell Plantations' mission in caring for the gorge was highlighted in the 1987 controversy over the construction of the Cornell Theory Center. The building's original plan located it well within the gorge's tree line, behind the engineering quad. Betsy Darlington, member of Ithaca's Conservation Advisory Council, was particularly concerned about the placement of the Theory Center, and she led a campaign to alter the plan.

Darlington often enjoys walks in the gorge, and she felt that the building would "damage the gorge environment and be aesthetically awful." Darlington said, "I didn't know if anyone would agree with me. I thought it might be a hopeless cause, but I thought that the battle was not lost until it was lost." Darlington and the Plantations worked to change the plans for the Theory Center, including a compromise site across Campus Road from Hoy Field.

Darlington's interest in the gorge led her to organize the first gorge clean-up in 1987. Gorge garbage is a continual problem, although the emphasis has switched from household rubble and ash to more spectacular waste. Televisions, sofas, and refrigerators are more common these days, although street trash and fast food cartons are also a problem.

Currently, gorge clean-ups occur twice a year. The Cornell Outing Club earns money by regularly removing trash, but the larger clean-ups involve the community and increase awareness about keeping garbage and graffiti out of the gorge. Linda Emmick, Cornell Plantations Public Affairs Assistant, helps to coordinate and has participated in the gorge clean-ups. Emmick said that the Plantations provide equipment and garbage bags for the clean-ups.

"People get exuberant," said Emmick. "The setting itself makes it very easy to be outside and cleaning up." Emmick told about one enthusiastic volunteer who pulled a length of fencing from the gorge. The volunteer dropped a rope from the College Avenue bridge down to the fencing in the gorge below. He then hoisted the fencing up with the help of passers-by who gave him a hand.

Reddington pointed out that gorges can be dangerous. "Going in there in the winter is taking your life into your own hands," he said. Once the weather warms up and the trails open, though, it will be a perfect time to visit Cascadilla Gorge. Robert Treman would be glad to know that the gorge is cared for and that the lower trails are reopening. In his will he wrote, "I have considered it a priceless heritage to live in the midst of and to enjoy the wonderful beauties of nature in the hills and valleys, the streams and gorges... It is my earnest wish that in the future years others will carry on the work of making these natural beauties more accessible and enjoyed by all."
AMIGOS, Not Gringos

DOES YOUR IDEA OF A FUN SUMMER include getting diarrhea, getting sick from drinking amoeba infested water and digging twenty latrines? It might if you are an Amigos volunteer in Latin America.

“It’s just a fantastic experience—sort of like a Peace Corps and student exchange combined,” said Becky Greene ’92. Becky has been with the Amigos program twice. She went to Ecuador with them in 1986 and to the Dominican Republic in 1987.

Amigos de las Americas started as a summer project of a Houston church youth group in 1965. Its original aim was to inoculate people in the remote areas of Honduras against certain diseases. In 1966 it was incorporated as a nonsectarian, nonprofit, educational organization, and since then has sent more than 12,500 U.S. volunteers to Latin America for an experience they never forget.

These young volunteers do not deserve the derogatory term of “gringos” often given to foreigners who have gone to Latin America with ideas of manifest destiny and exploitation. These Americans go with intentions of helping in rural communities. They fully deserve to be called friends or “amigos.”

Living with a host family in a rural village, each volunteer participates in various developmental projects like community sanitation or dental hygiene. All together the volunteers have provided more than 10 million health services in 14 Latin American countries over the last 23 years.

Tim Dorss ’91 helped build fifteen latrines as a volunteer in Mexico during the summer of 1988. “The hardest part is not actually building the latrines, but getting people to use them,” he said. “The latrine just doesn’t stand for their culture.” Overcoming this problem called for original solutions. Christian Plumb ’89 said that his Amigos partner in Mexico wrote a song to convince children that using the latrine is a good idea. “They would all stand on the soccer field and sing ‘Let’s all go to the latrine,’” said Plumb.

But Amigos is more than just latrines. There are also dental, vision, rabies, and yellow fever programs. Oral rehydration therapy is practiced and taught by many volunteers. “Many people believed that babies with diarrhea had too much water in them,” said Dorss. “It was difficult to convince a sixteen-year-old girl who believed this that her baby could be helped by mixing so much sugar with salt and water and giving it to the baby.”

Sometimes there are more personal problems that volunteers need to overcome. When Dorss arrived at Guanajuato, Mexico, he almost passed out. His host village has very thin air because it is 7,000 feet above sea level. Other volunteers in the area were sent home because of sickness caused by drinking water with amoebas in it. Many other volunteers get diarrhea when they arrive in their host country. Most are able to continue their volunteer work despite this slight inconvenience.

Volunteers also must deal with culture shock. “It was the worst I ever felt in my entire life,” said Christopher Fellenz ’92 about the moment he arrived at his host village in Mexico. “I had to deal with a strange culture and a strange language. The four years of Spanish I took didn’t mean anything there. I was basically on my own. The first couple of days were hard, but after awhile I began to get comfortable. It turned out that the second worst I ever felt in my life was the day I left.”

“It’s a big shock for everyone when they first get there,” said Plumb. Plumb has had Amigos experience in Paraguay and Mexico and will return to Latin America in the summer of 1989 as a route leader in charge of new volunteers.

“In Paraguay my family picked up my partner and me in an ox-cart,” said Plumb. “We were totally disoriented after riding in an ox-cart in the dark for an hour.” When Plumb and his partner fi-
nally arrived at the family's house they were greeted by a drunk man who was laughing and asking them questions in a language they did not understand. "We were laughed at a lot and it was degrading at times," said Plumb. "It eventually mellowed out and we enjoyed hanging out with the family."

The villages volunteers stay in are very poor. The village where Fellenz lived had houses made of cheap bricks, corrugated tin roofs and sometimes had a bed inside. "Some people made their houses out of homemade brick," said Fellenz. "I'm not sure what that brick's made from, but it didn't smell too great."

"The family I stayed with had fourteen kids and their house wasn't very big," said Dorss. "On one of the double beds slept three adult men or four young girls." Because Dorss was a guest, he was given a bed by himself. "I felt bad because I slept alone on the bed while others slept on the floor." Even when Dorss offered to sleep on the floor with the others, the family insisted that he sleep alone on the bed.

Sometimes getting the community to accept the volunteers is a challenge. "In Paraguay I had no problems because everyone was friendly and open," said Plumb. "Mexico was a lot harder. There the people were more reserved against "gringos." Fellenz found that he got along best with families he worked with. "After I started working with some of the people I began to feel comfortable with them."

A number of volunteers return home before completing their Amigos assignment in Latin America. Most return because of sickness or breaking Amigos rules, not because they did not like the experience. "The program has a self selecting process," said Plumb. "Those who won't be able to do it usually don't want to do it in the first place."

Both Fellenz and Dorss decided to become volunteers because they are interested in medical careers. "I always wanted to be a doctor and go to the third world," said Fellenz. "Mother Theresa and people like her are my idols."

"Amigos helped me decide that I wanted to be a rural sociology major and continue working for international development," said Greene. She said she received more from the experience than she put into it. "Maybe that was just because of my young age, but I learned so much and matured too."

Plumb also believed he got much more from the experience than he put in. He said that because he comes from a divorced family, his host family in Paraguay was in some ways his first real family. "As a volunteer you don't make a real big difference, but after awhile you build up a rapport with the people and all the barriers melt away."

by Roderick Ventura '90
Rallye 'Round the Lake

IF YOU WERE GIVEN THE HINT "Ralph Cramden, look on the enterprise," where would you go in Ithaca?

You might assume that Ralph is a code word for the direction "right." You also might recall that Ralph Cramden from the Honeymooners drove a bus for a living, and it might occur to you that Captain Kirk was on the Enterprise. Then you would know to take a right turn and drive to Van Buskirk Road. If all this makes any sense to you, then you would probably have done very well in the Fifth Annual Rallye Round the Lake road race/fund raiser, on April 22, 1989.

Rallye Round the Lake is a timed distance road rallye car race around the Cayuga Lake and greater Ithaca area, sponsored by Theta Delta Chi fraternity and Delta Gamma sorority. Benefits from the event go to the Special Children's Center of Ithaca, an organization that educates disabled children between the ages of six and 18. The event raises close to $2,000 for the organization.

Rallye Round the Lake took place in the 1940s and 1950s, then disappeared for 30 years. Members of Theta Delta Chi revived the race in 1984 and intend to keep the tradition going long after the fifth annual rallye. Organizers of the event say that the major key to the success of the rallye are the contributions of local institutions. "A main concern of the rallye is to get as much of the Ithaca community involved as possible," said this year's rallye chairman Jesse Selengut '90. The major sponsors of the 1989 Rallye were Kinko's Copy, Simeon's Restaurant, Screen Graphics, and for the first year WICB radio station advertised for the race, and broadcasted during the event on location at one of the checkpoints. Organizers of the rallye estimated that this year's race generated over $2,000 for the Special Children's Center of Ithaca. "It's an incredible amount of work to organize the whole event, but it's also an incredible amount of fun," said Selengut.

The process by which the event functions is interesting. Students or Ithaca residents buy tickets for $25 to enter a group of people and a car into the race. Approximately 200 cars were in the Rallye in 1988. On the day of the race each team is given a list of hints of directions to various checkpoints throughout the greater Ithaca area.

When and if a team figures out a hint, and gets to a checkpoint such as Van Buskirk Road, their time of arrival is recorded, and they set out with a new hint for a new checkpoint. "It's strong, goes well with Coke and you're a mile past it." They'd better turn around and head for Myers' (rum) Road!

At the end of the day, the car that finishes the race with the least time between checkpoints wins the traditional grand prize of an all-expense paid trip to California. "Most teams never completely finish the race, but everyone is entertained trying to figure out the hints," said Paige Van Wirt '89, a contributor to the Rallye.

Several other prizes were donated by local businesses, such as a free dinner at a restaurant or a T-shirt. These gifts are given to teams whether they finish or not. Last year a prize for "most spirited vehicle" was given to a vintage 1950s Rolls Royce with a huge plastic doll mascot sitting on the roof. A prize for "the most gripless entry" was awarded to a car that ran into a telephone pole instead of a checkpoint.

If you were in Ithaca on April 22 and you saw several cars with passengers ripping their hair out and pointing in different directions, keep in mind it was all for a good cause. As Kathy Otis '89, who has volunteered time to Rallye Round the Lake for four years said, "Everybody involved in Rallye Round the Lake, from the sponsors, to the benefactors, to the racing teams, to the members of Theta Delta Chi and Delta Gamma has a great time and gets something out of it. I think that's the key to a truly successful fund-raiser."
Firefighting

101

Did you ever dream about saving people from burning buildings or maybe just about riding on a big fire engine? First Lieutenant Joshua Wright '90 of Company Nine thinks everyone wants to be a firefighter at some point in his or her life. The Ithaca community is protected by a force including Cornell student volunteer firefighters. The commitment demands much of the volunteer's "free" time but the benefits amount to a worthwhile experience.

Some of the firefighters have a background in public safety while others have no past experience. James Carcano, arts and sciences '89, started working for an ambulance corps in Westchester County, New York when he was 16 years old. "I heard about the volunteer firefighter positions in Ithaca from my aunt who lives in the area," Carcano said. Most of the recruits heard of the firefighter opportunities by word of mouth on campus. Captain William Martinson, architecture, art and planning '89, of Company Nine got involved after rooming with Carcano during their freshman year. Wright heard of the opportunity during his sophomore year "from a guy in his physical education class" that asked if he was interested in being a volunteer firefighter. At about the same time, Wright also joined the Cornell Emergency Medical Service.

Once an individual signs a contract to join the firefighters, he must go through an extensive training period. "Everyone goes through 14 weeks of training," Carcano said, "which includes fire fighting techniques, fire prevention and use of equipment." Each department performs its own monthly training. Some volunteers "take extra classes at fire academies or receive Emergency Medical Technician training," Carcano said.

The City of Ithaca receives some 3,600 calls per year. Station Nine, located at 309 College Avenue, responds to about 40 percent of these or about 1,400 calls per year. This amounts to an average of four calls per day. However, Martinson said, "The percentage of actual fires is only around five percent." The station serves the Cornell community including the campus, College town, East Hill and other border areas.

At all times, Station Nine has two drivers on duty. Carcano started bunking at the station part-time during his sophomore year. Both Carcano and Martinson began living in full-time during their junior years. The other volunteers spend nights at the station when they want to.

One of the benefits of their spending so much time together is that the firefighters "establish a good working relationship with one another," Martinson said. The station provides a family atmosphere for the volunteers to live in. "There is a lot of horsing around," Carcano said, "but that is all left behind when we go to a fire." On a call, "my life may depend on [the other firefighters]," Wright said.

There is also a personal reward from the volunteer program. "It's a real rush to have the opportunity to save lives," Wright said. However, many people forget about how dangerous the firefighter's job is and that, "You could punch your ticket at any time," Carcano said.

While the fire duties consume a large portion of their day, the volunteers manage to find time for academic and social pursuits as well. Carcano said his grades have improved since he joined the firefighters because "getting out on calls breaks the monotony of studying." Wright also noticed his academics have gotten better. "The fire house provides a quiet place to study," Wright said. "The alarms are like study breaks."

Carcano and Martinson are both members of Alpha Delta Phi fraternity. Wright holds an Ag Ambassador position in charge of planning social events. The ambassadors "show off" the College of Agriculture and Life Sciences to prospective freshmen. He also is co-chairman of the Orientation Steering Committee.

A final benefit of being a part of the volunteer fire service is gaining professional experience. Many of the volunteers choose to continue in a fire safety career after their college experience. Carcano and Martinson will pursue paid positions with the New York City Fire Department. "The City has the biggest department in the world," Carcano said. Wright, a plant science major in the ag college, plans to work in a family nursery but will continue to serve in volunteer fire companies when he leaves Cornell.

Because many of the volunteer firefighters are graduating this year, there is, "definitely a need for increased manpower," Carcano said. Recruiting procedures for this year include distributing publicity materials during Informania at Willard Straight Hall and promoting the volunteer opportunities available during Fire Awareness Day. Wright wants to work on developing a program for recruiting volunteers which would educate the public on the benefits involved with being a firefighter.

by Ingrid K. Storer '89

Volunteer firemen Jim Carcano (left) and William Martinson (right), stand by Ithaca Fire Engine #9.

Wright, Carcano, and Hill are working on a program for recruiting volunteers.
A LEISURELY STROLL THROUGH the colorful Cornell Orchards can occupy the springtime afternoons of many people. But what happens if one garden path stroller keeps walking? He or she may come abreast of some very odd looking structures. Fifteen of them to be exact. They are greenhouses belonging to one of the largest and most intense acid rain research projects in the United States.

Situated behind the orchards, the "ROPIS" (Response of Plants to Interacting Stresses) field site is home to at least 60 young red spruce trees and other tree species. They are enclosed in miniature greenhouses covered with plastic. Intertwined among these chambers are hoses, wires, tubes and plugs. The scene gives on-lookers an odd feeling that they are staring at a futuristic lunar colony. However, it is here among these strange complex structures that highly motivated people are finding evidence of a link between acid rain, high concentrations of ozone and red spruce population decline.

“Our main goal is to observe the interaction of acid rain and ozone on the growth, nutrition and physiology of red spruce,” said Ruth Sherman, a research support specialist for the project. Sherman works for the Department of Natural Resources under the supervision of Prof. Timothy Fahey, chief biogeochemist for the project. The Boyce Thompson Institute for Plant Research, a private institution, is also working on the project with Cornell’s natural resources department.

The ROPIS team hopes to discover that acid rain and ozone work together in causing deterioration of their red spruce population. When sulfur dioxide and nitrogen oxides, which originate mostly from automobile exhausts and smokestacks, interact with atmospheric water, acid rain is formed. Ozone prompts the “stomata” or gas-exchange pores of plants to expand, thus allowing acid to enter the leaf.

For the first time since the study began two years ago, the ROPIS team is getting concrete evidence. “This year we found increased rates of leaching of the nutrients out of the soil and foliage in the more acidic pots,” said Sherman. Preliminary observations illustrate the potential for the concerted effects of tree growth and strong acid loading to deplete the base status of acidic forest soils.” She also stated that this might have some long term effects on tree growth.

Research on ozone showed “...effects on foliage. Results indicate that the ozone possibly was taken up by the stomata and thus leached the micronutrient, zinc, out. This might be physiologically damaging although no visual damage could be detected,” said Sherman. And according to Roger Sayre a graduate student working on the project, “The observed effect on zinc may be suggestive of a cumulative effect on older foliage and an early warning that more ozone effects may appear this summer and next.”

These findings were welcomed wholeheartedly by Sherman and Sayre, both of whom had endured two years of research with almost no evidence linking acid rain and ozone to tree deterioration. “It is a unique study in that it is long term with so many variables and it has a highly replicated design,” said Sherman.

To reproduce natural conditions in an unnatural environment is just what the ROPIS researchers are trying to do. Each of the 15 greenhouses holds six spruce trees, which receive pre-made "rain". This rain is actually water which has been treated with sulfur dioxides, nitrogen oxides and other compounds to simulate ambient or natural rainfalls with pH's of 5.1, 4.1 and 3.1. All pH's that fall below the neutral 7 are considered acidic. Thus, by isolating the trees from any ambient rain, the ROPIS team hopes that in three years when the project ends, the results will be very accurate.

The project is scheduled for four growing seasons and this summer will be its third. Sherman hopes that more conclusive evidence will be forthcoming, “We hope that the study will turn up more detailed data within the next couple of years.” However, funding for ROPIS is scheduled to expire in 1992.

The ROPIS project receives approximately $1 million annually, and the Cornell location is just part of a transnational study. Sites near Virginia Tech,
Pennsylvania State University and Stanford University are also involved in similar research. The studies are being funded primarily through The Electric Power Research Institute in Palo Alto, California and the Empire State Electric Energy Research Co., and Niagara Mohawk Power Co. in New York.

It cannot be denied that such research is needed. Government is not going to act on environmental issues such as acid rain until there is scientific evidence on the table. "Legislative action against acid rain would be a step in the right direction, however, ecosystems are extremely complicated. It is not just ozone and acid rain, there are other factors that need to be researched also," said Sherman.

Fortunately, the attention that the acid rain issue should have received from the scientific community long ago is now on the upswing. According to a recent study by the World Resources Institute in Washington D.C., "Scientific evidence clearly indicates that acid deposition and ozone can injure foliage directly." The study adds that this injury weakens the tree and readies it for disease, insects and other natural forces to invade and destroy.

There is a growing consensus in the scientific community that pollution acting with natural stresses is weakening ecosystems. Camel's Hump in Vermont and Mt. Mitchell are prime examples of ecosystem deterioration. Already in Europe over 20,000 square miles of forest have yellowed due to pollution and natural forces. Scientists are worried that because U.S. tree species and pollution levels are comparable to Europe's, the U.S. may be on the brink of the same fate.

So essentially it is a race against time. Researchers in this field are being pressured to obtain accurate results quickly with a set budget. Legislators refuse to act on the matter until concrete scientific evidence is in hand. The Institute's report advised that "...in a climate of scientific uncertainty, policies and regulatory actions should prevent harm while researchers strive for greater certainty."

Such preventative actions might include the installation of "scrubbers" on smokestacks. Scrubbers act as filters which reduce sulfur and nitrogen emissions. Also, we as a nation must start investigating new energy sources that are cleaner than the fossil fuels we currently rely on.

Evidence of acid rain destruction is rapidly accumulating and with it public awareness is growing. However, the question remains; Is there time enough to stop the deterioration of our forests before they, like Europe's forests, yellow and wither away? Surrounded by multicolored charts, graphs and tables, Sherman said, "It is possible that by the time all the data is collected and analyzed, and the legislature acts upon it, it may be too late."
**MILKING THE POSSIBILITIES**

"WE REALIZED THAT WE HAD GIVEN them all this technology, but we hadn't taught them how to manage it," said Professor Charles Sniffen of the Department of Animal Science. Sniffen along with Professor Robert Milligan of the Department of Agricultural Economics felt this was the problem that faced New York's dairy farmers and had caused New York to fall behind other regions in the country in dairy productivity.

The PRO-DAIRY program was developed to meet this need. It began in November, 1988, and has been well received by participating dairymen. "I've been in programs that concentrate on technical skills, but this is the first program that helps you to be a better manager," said Onondaga County dairy farmer Dave Fisher '75.

The curriculum helps farmers find new ways to look at problems. "The seminars are aimed at getting farmers to find creative alternatives to solving the problems they face," said Clint Young, an Extension Specialist with the program. After the initial seminars, the farmers look for opportunities for improvement on their own farms.

Some dairymen are already making changes because of the program. "We're allocating responsibilities and defining jobs for our employees better than we used to," said Fisher. Other farmers have made changes in their philosophy rather than in any specific practice. "I'm not making any major changes, but I've learned to get a better handle on the whole situation," said Oneida County dairy farmer Mike Cosgrove '76.

If the workshops improve management practices the New York dairy industry should face a brighter future. PRO-DAIRY has funding for three years and the staff hopes it will become a regular part of Cornell Cooperative Extension services. Milligan and former Cornell professor Terry Smith initiated PRO-DAIRY by making a funding proposal to the New York Department of Agriculture and Markets.

PRO-DAIRY is open to all dairy farmers and the first workshop, "Managing for Success" is free. The other seminars cost only the amount to cover the cost of the materials used. "Of course we hoped to attract those farmers who could do a better job of managing, but PRO-DAIRY is meant for anyone with the willingness and ability to become a better manager," said Young. "Too many farmers see themselves as laborers instead of managers. We're trying to overcome that notion."

Thus far, 1,075 dairy managers representing 750 farms have taken part in the "Managing for Success" seminar. The seminars are run by teaching teams made up of Cornell Cooperative Extension agents, the PRO-DAIRY staff and members of sponsoring agri-businesses. "One benefit of the program is strengthening the ties between agri-business and Extension," said Young.

The staff is pleased with the response, but Young points out that there are more people out there who could take advantage of the program. "Managing for Success" consists of one seminar a week for a two-week period. The farm manager then meets with a member of the teaching team individually for the "Management Clinic" to analyze opportunities on the individual farm. The farmer may enroll in one of three production management courses after the "Management Clinic" to improve his or her skills in managing certain operations on the farm. The courses are offered in milking management, forage crop production and feeding management. Farmers can enroll in as many as they feel necessary.

There is also a more intensive "Management Workshop". This two day seminar goes more in depth to farm management practices. Some participants have reacted enthusiastically. When the participants were asked if they would like to follow up at a later date, Milligan recalled, one farmer responded, "What are you doing tomorrow morning?"

"The extension people have really taken off with PRO-DAIRY, we couldn't have done it without them," said Young. Because the program is new, some adjustments will be needed. "It was our first time presenting the material and I think the second and third sessions went progressively better. Next year we should be extremely well prepared for the program," said John Conway, Regional Specialist for the PRO-DAIRY program.

One of the recommendations for farmers is simply to make a "to do" list for themselves and their employees each day. A simple concept like having a list of things to do, can make the difference in being a better farm manager. "It's no one big thing. It's all those little things that you sometimes forget that make a good manager a very good manager," said Fisher. If more dairymen start doing the little things, then PRO-DAIRY might succeed at making New York's dairy industry more competitive with the rest of the nation.

by Thomas W. Cosgrove '90
Cornell Helps Save New Hampshire Woods

Cornell University and Dartmouth College are working together with the Trust for Public Land, a wilderness preservation organization, to secure 22 acres of New Hampshire forest. Cornell came to the rescue of the TPL by providing half of a $125,000 short-term loan. This money was needed by TPL to refinance the purchase of forest land at Mirror Lake, New Hampshire. Development plans were set for Mirror Lake last year, threatening the work of ecology researchers. The federal budget did not allow for the land's purchase by the United States Forest Service. When all seemed lost, the TPL turned to Cornell and Dartmouth for help.

Cornell's action reflected its continued commitment to wildlife conservation. Eventually, the lands will be bought by the USFS and they will be available for ecological research by Cornell and Dartmouth. Following the sale, Cornell will be repaid.

HOSTing the Elderly

Cornell Cooperative Extension (CCE) is helping to meet the housing needs of the elderly in these difficult times. Along with the New York State Office for the Aging, CCE is co-sponsoring the Home-sharing and other Options for Seniors Today (HOST) program. HOST, designed to develop inexpensive housing alternatives for senior citizens, was initiated on February 24, 1989 at Tompkins County's Cooperative Extension Education Center in Ithaca.

HOST, under way in the Albany metropolitan area, has developed such alternatives as match-up home-sharing, shared living residences, accessory apartments, and elder cottages. HOST promises to repeat its Albany success in Tompkins County.

From Waste to Resource

Whey, a waste product of cheese processing, is being given a new life at the New York State College of Agriculture and Life Sciences. Researchers of the College, led by Jean Hunter, assistant professor of agricultural and biological engineering, hope to turn cheese whey into acetone and butanol, typically petroleum by-products.

Cheese whey is a liquid that remains after cheese is processed. It is abundant in the state, as a result of a large dairy industry. Considered a waste product, whey poses problems in disposal.

Hunter and associates are developing a process in which microorganisms feed on the whey and produce acetone and butanol. Therefore, the whey is cleanly disposed of, while valuable resources are produced.

The New York State Energy Research and Development Authority is providing $51,399 for the project. An additional $27,371 is allotted by the College.

Crowley Foods, Inc. of Binghamton, a large dairy-products corporation, is providing technical assistance and cheese whey. Baydacto, Inc. of Ithaca, another contributor, is testing other product-separation processes.

Cornell Writer Wins Fifth Award

Yong H. Kim, a science writer for the Cornell News Service, has won a fifth consecutive writing award in the annual Northeast Farm Communicators Association competition. Kim's story on parasitic Asian mites endangering U.S. honeybees was named Best General Farm Story in 1988. Kim, a native Korean, won the association's top honor as Farm Communicator of the Year in 1985.

Betting on Research

The College of Veterinary Medicine will receive $437,000 in 1989 from the Harry M. Zweig Memorial Fund, a New York state grant for equine research. The Zweig Fund is unique in that it represents two percent of all revenues gained from the state's racetrack and off-track betting activities.

Major research projects selected vary from the study of blood-flow in horses to research on equine immunogenetics.

Cornell engineers and scientists have won 11 of 22 research grants for 1989 given by the National Oceanic and Atmospheric Administration (NOAA) to further research on the aquatic environment. A total of $1.9 million was allotted for New York state research projects. Cornell studies range from such fish and sea projects as the utilization of fatty fish, conducted by Joe M. Regenstein '65, MS '66, to the study of toxic chemicals in river estuaries, conducted by Gerhard H. Jirka and Wilfried H. Burtsaert.
PICTURE YOURSELF IN SPACE. YOU have just boarded your spaceship after spending the day exploring the moon. It is now dinner time and all you can think of is how great it would be to eat real, fresh food as opposed to processed, dehydrated space food. To your surprise, when you go to select your meal, you discover a plastic carton of juicy apples, none of which are the slightest bit bruised or overripe.

Apples in space? Impossible, you say. While this scenario is still a thing of the future, researchers in the Department of Food Science have developed retail-size food packages that can keep apples crisp and fresh for up to six months.

Apples breathe much like people in that they inhale oxygen and exhale carbon dioxide continuously. It is respiration, however, that causes fruit to ripen, overripen and eventually rot. Professor Syed S. H. Rizvi has invented a package which retards respiration thus preserving fruit for greater lengths of time.

“The design involves a plastic tray with pockets that hold the apples. After the apples are placed in the pockets, a film of plastic is sealed over the top,” Rizvi said. “This simulates a miniature controlled atmosphere storage system which maintains 3-5 percent oxygen and carbon dioxide.”

By Deborah H. Lippert '89

Bulk apples are currently kept in controlled atmosphere warehouses until they are shipped to retailers. These warehouses are kept at temperatures of 32-38 degrees F and have oxygen and carbon dioxide levels that slow respiration. When these warehouses are opened, the atmospheric balance is upset and the apples begin to deteriorate,” Rizvi said.

While Rizvi does not expect his micro-atmosphere system to replace the current controlled atmosphere system (CA), he does feel his system has some advantages over the CA system. For instance, apples kept in micro-atmospheric packages do not start to deteriorate until the consumer opens the package and even then the packages can be resealed. Apples from the CA system start to deteriorate before they even hit the supermarket shelves.

Under the CA system, apples cannot be stored with other vegetables and fruits because they have different storage requirements. But with the micro-atmosphere system, apples can be refrigerated with other commodities because the packaging controls the atmospheric conditions.

The uniqueness of Rizvi’s new system is that it doesn’t require mechanical equipment to maintain atmospheric conditions, but takes advantage of Mother Nature. So while it may cost a little more to package the apples, it will cost less and will be much easier to store them.

“The prototype is made of specially designed heavy-duty plastic but eventually the package could be made of cardboard lined with plastic. This will still render the packages sturdy enough to stack on top of one another without the risk of bruising the apples,” Rizvi said. “We have obtained funds to conduct further studies on the system but as of yet our research has not been completed. However, we don’t expect the total packaging costs to amount to more than a penny or so an apple.”

And what will this new system lead to in the future? Rizvi, who is applying for a patent on the system, believes that extending the shelf-life of other fresh fruits and vegetables is definitely a possibility. This could mean fresh summer corn on the cob in the dead of winter.

“NASA is interested in using the system to provide fresh fruit to astronauts,” Rizvi said and then added, “I would really like to be able to deliver New York apples in perfect condition to Tokyo where they are considered a premium commodity.”

And if things go as planned he probably will.

New York State College of Agriculture and Life Sciences, a Statutory College of the State University, at Cornell University
About the Issue

Think of October. Autumn winds blow signaling time to reap the benefits of a plentiful harvest. The time of the year when the grain and crop is gathered is known as harvest time. This issue examines aspects related to the preparations before harvest. We offer insights on soil, gardens and the problem with pesticides. Harvest is also used to describe the outcome of a successful effort. This issue examines the efforts of the early Cayuga Indians and the successful outcome of an interesting family that continues to sow their seeds in Cornell University.

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HAVE YOU EVER NOTICED HOW UNUSUALLY BRIGHT AND RED THE FULL MOON IS IN LATE SEPTEMBER? INDIAN TRIBES IN THE NORTHERN AND EASTERN UNITED STATES DO. TRADITIONAL INDIAN FARMERS LOOK TO THE MOON FOR ADVICE ON WHEN TO PLANT AND HARVEST THEIR CROPS OF CORN, SQUASH, PUMPKINS AND BEANS.

Often, natural phenomena have great influence on human behavior and beliefs. Primitive peoples create supernatural explanations for events they do not understand. Note how the Book of Genesis seeks to explain a terrible flood by relating the story of Noah’s ark.

The phenomenon of the harvest moon is the attempt of several Indian tribes to interpret the unknown in familiar terms. Its strange red appearance and unusual brightness tell many native Americans the time has come to bring in the rest of the crops, according to Stephen Fadden ’88, editor of The WEB, a newsletter circulated among New York State Indians. A graduate student in the Department of Communication, Fadden is a member of the Mohawk tribe, which is part of the Hodenosaunee (pronounced ho-de-no-SHO-nee) Confederacy. They are more widely known as the Iroquois.

Fadden said the Mohawk women watch the moon, which they regard as their grandmother, and the various constellations in the sky to determine when the time is ripe for planting and harvesting. When the constellation Pleiades achieves a certain alignment with the moon, planting season begins.

A certain alignment of the Big Dipper, which the Mohawks call Monster Bear, with the moon signals harvest time for pumpkin and squash. The rise of the harvest moon warns the women that winter is quickly approaching. “It used to scare me when I was a kid, but my aunt told me it was just my grand-mother saying it was time to bring the rest of the harvest in,” said Fadden.

Technically, the harvest moon is the full moon nearest the autumnal equinox, which usually falls on September 22. The moon appears larger than normal because it is seen directly on the earth’s horizon in relation to buildings, trees and other structures, according to Paul Helfenstein, a research associate in the Department of Astronomy.

“When the moon is up in the sky, you don’t have any reference points to compare it to,” said Helfenstein. “But when it’s on the horizon, you see it in comparison with objects on the earth, and it looks bigger.”

Mark Wysocki MA ’88, an instructor in the Meteorology Unit of the Department of Agronomy, explained why the moon takes on a bright red appearance. He said the moon reflects the light of the sun, and when the moon is on the earth’s horizon, some of the shorter wavelengths of the sun’s light, particularly the blues, are scattered by the earth’s atmosphere. As a result, the longer red wavelengths dominate the light passing through the earth’s atmosphere.

“When the moon is on the horizon, the light is taking the longest path through the earth’s atmosphere, so the shorter wavelengths are scattered out,” said Wysocki. The same phenomenon causes bright red sunsets, he said.

According to Helfenstein, the harvest moon makes its appearance several days in a row at nearly the same time because the moon’s orbit is least inclined to the earth’s horizon at that time of the year. He said the moon does not dip below the earth’s horizon too much during the daytime and does not have far to travel when it rises. Therefore, the harvest moon lights up the nighttime sky for several consecutive days. “It looks like you’re getting four extra full moons,” said Wysocki.

Fadden, who grew up near Syracuse, N.Y., spent much of his childhood with his late aunt and grandmother on the Akwesasne (pronounced awk-wa-ZAAS-nee) Reserve near Massena, N.Y., on the New York-Canadian border. From the two women, Fadden learned about traditional Indian agricultural practices.

“People think Indian agriculture was random, but there was a lot of empiricism,” said Fadden. For example, Indian fields were laid out very carefully so the crops could obtain the maximum amount of sunlight.

Fadden said many native Americans resisted new farming tools such as the plow because of spiritual beliefs. “Indians believed in disturbing the earth only where they were planting. Turning up the earth where you weren’t planting was like hurting your mother,” said Fadden.

Many native Americans still adhere to their traditional farming practices. Fadden’s aunt and grandmother studied the phases of the moon and its relation to the stars closely to find out the best times to plant and harvest the garden they tended on the reservation. Even the Farmer’s Almanac notes the rise of the harvest moon each year. Science may have found a way to explain the phenomenon, but man’s fascination with the bright red orb in the dark autumn sky still lingers.
GLORIOUS GARLIC

GARLIC. THE MERE MENTION OF ITS name brings about strong emotional reactions in people. Many cringe at the smell of garlic, especially on the breath of those nearby.

In Ancient Greece, garlic eaters were barred from worshipping in temples in order to protect others from garlic breath. Home remedies and some doctors boast of garlic's strong curative powers. Pliny the Elder, a famous Roman physician, cited garlic as a cure for 61 maladies, ranging from asthma to scorpion stings.

Chefs around the world hold garlic close to their taste buds, for it enhances many of their culinary creations. Garlic plays a key role in Italian, Chinese and French cuisine.

Perhaps more so than all of these people, garlic growers react most emotionally to this unique crop. According to Roger A. Kline MS '69, resident garlic expert in the vegetable crops department in the College of Agriculture and Life Sciences, "Most gardeners love garlic."

One reason why they like garlic is that it is relatively easy to cultivate. One needs only to take the following steps to grow a successful crop.

First, one must select some garlic bulbs. Large bulbs are best, for they propagate other large bulbs. Kline advised, "Take a trip to farm stands and collect enormous bulbs of local garlic strains." One should do this, for most of the garlic in supermarkets originates in California, and does not grow well in New York state and the northeast.

One must also choose between soft-neck and hard-neck garlic varieties. Most consumers are acquainted with the soft-neck, white garlic because it predominates in supermarkets. Kline said, "Soft-neck garlic is easy to braid." Hard-neck garlic cannot be braided easily. However, Kline stated, "Hard-necks generally grow better in New York. They seem more resistant to disease and keep longer in the field than the soft-necks." Hard-neck cloves on the average are bigger than those of soft-necks.

After one has chosen the desired bulbs, one is ready to plant. "Mid-October is the best time to plant," said Kline. "In the fall season, there might not be any green growth, but the roots are establishing." For good results, the soil should be enriched with well-composted organic matter, such as manure or vegetable debris.

After selecting the garlic bulbs, the cloves must be separated. Kline suggested, "Put them two to three inches down in the soil and cover them up. Space them from four to six inches apart in rows that are two feet apart." One should place them with the basal roots down. If the cloves are planted in the fall, they will be ready for harvesting in July. Kline believes that one should harvest the garlic when there is a subtle yellowing of the leaves. Leaving it longer risks having the cloves enlarge and break through the protective skins of the bulbs. Garlic keeps poorly in this condition.

After the garlic is harvested, Kline said, "It should be cured for two weeks in a dry place in 60-70 degree (Fahrenheit) temperatures." One can either braid the garlic (if soft-necked) or cut the tops off and store it.

Garlic keeps longest when placed in paper bags and refrigerated. Kline said, "At 40 degrees Fahrenheit and paper-bagged, garlic can keep for four to six months. Garlic always deteriorates faster when left at room temperature."

After growing garlic, one can appreciate its distinctive flavor in various dishes. Garlic must not be cooked for too long, however, or its flavor will change as well as its medicinal properties.

Eating garlic can have some curative benefits. Recent scientific studies in India have shown garlic to reduce the body's serum cholesterol levels, therefore, reducing the risk of heart disease.

Dr. J. Martyn Bailey of George Washington University has shown that garlic inhibits clot formation, lowering the risk of strokes and heart attacks.

Other curative claims, such as those of garlic as a cure for the common cold, have not been proven to be true. However, Dr. Eric Block of SUNY Albany has isolated compounds from garlic which were identified to be antibiotic. Kline said, "One year a woman from France was visiting me and she did a lot of cooking heavily laced with garlic. I did not have any colds that winter."

What about garlic breath? Despite many claims, eating parsley, or anything else, will not take away garlic breath. Kline said, "It's in the bloodstream. In fact, you can rub garlic on your foot and it will show in your breath."

What can one do? One can follow two simple solutions. First, one can eat elephant garlic, a large variety with a milder taste and aroma than that of true garlic. Second, one can follow Kline's advice, "We should wear our breath proudly. We do not have to apologize for it." After all, garlic breath is a small price to pay for the benefits of our glorious garlic.
THE RECIPE FOR CORNELL BREAD can be found in popular cookbooks such as The Fanny Farmer Cookbook and Joy of Cooking, but few people know the story behind the bread. Clive M. McCay, Cornell Professor of Animal Nutrition, developed the recipe for the bread in 1946 when New York state Governor Thomas Dewey asked McCay to help devise a better diet for patients in New York state mental hospitals.

McCay was curious about how nutrition influences aging, and he was concerned about the diets of older people. McCay's studies on rats showed that a diet low in calories but ample in protein, vitamins and minerals contributes to a long, healthy life. He thought improved bread could be an ideal food to use in such a diet. McCay's original bread contained three special ingredients—soy flour, wheat germ and nonfat dry milk. By adding these protein-rich ingredients to white bread, McCay came up with a bread that included all of the proteins needed in the human diet.

"The bread was white because most patients ate and wanted white bread," explained Jeanette McCay MA '34, PhD '39, Clive McCay's wife. "The bread was well-liked and was served there [in the New York state mental hospitals] for 25 years. She said the mental hospitals stopped serving the bread due to new administrators and new treatment policies.

The bread became popular not only in New York state's mental hospitals but also in the New York state school lunch program and in bakeries all over the country. The recipe has been printed in the Ladies Home Journal and the New York Times Sunday Magazine, and the bread has been marketed under a number of names including Cornell Bread, Golden Triple Rich Bread and Hi-Protein Bread.

Clive McCay received numerous letters asking for copies of the recipe and wondering if the recipe could be varied to make more than just white bread. "I thought that there should be other breads," said Jeanette McCay. The McCays developed new recipes, each having the protein-supplying ingredients found in the original bread, first mailing them on mimeographed sheets and then compiling them in a booklet. The booklet has since expanded into a cookbook published in 1980 by Dover Publications called The Cornell Bread Book. The cookbook covers many foods made from dough including pita bread and doughnuts.

During the time when Cornell Bread became widespread, Clive McCay was concerned that large bakeries emphasized machinery and money at the expense of selling a quality loaf. At the time, bakers were not required to put ingredients on bread labels, so consumers had no way of knowing what was in their bread. McCay insisted that Cornell Bread offered for sale be labeled with the specific ingredients and proportions used by the baker.

Clive McCay did a great deal of research to establish the merits of Cornell Bread. Using rats as subjects, he experimented with the effects of different bread diets. McCay found that rats on diets consisting of 90 percent Cornell Bread and 10 percent butter or margarine lived and reproduced successfully, but those on similar diets including other types of bread did not. Jeanette McCay pointed out that people cannot live on Cornell Bread alone; they must also eat fruits and vegetables.

Although Clive McCay died in 1967, his desire to have people eat a better bread still has an influence. Patricia Thonney, extension associate, and associate professor Carole Bisogni '70, MS '72, PhD '76, both of the Division of Nutritional Sciences, are working on a bread cookbook which will include several Cornell Bread recipes. Although publication plans for the book are uncertain, it will be used to support Cooperative Extension programs. "It's an educational cookbook," said Thonney. "It focuses on recipes and on the Dietary Guidelines for Americans."

The new book will be dedicated to Clive McCay. "We decided to dedicate it to him for several reasons," said Thonney. "Partly to acknowledge Cornell Bread, and also because of his philosophy of meeting people's needs. We hope to meet people's needs too."

McCay thought that Cornell Bread would meet people's needs by supplying nutrition at a low cost. Although few people know the bread's history, many have benefitted from the bread's ingredients.
by Patricia Ann Froehlich '89

"GROWING UP IN A HOUSEHOLD with a Cornell fanatic is bound to rub off," said Michael Browne Jr. '87.

The fanatic that Michael is referring to is his father, Michael J. Browne '55 MBA '56, who along with his wife Elizabeth Browne '53, is active in the Cornell Club of Cleveland. Their involvement must have had an effect, because not only did Michael attend Cornell, but three of his ten siblings followed suit—Mary Browne '87, Dorothy Browne '88, and Joseph Browne '90.

All students in the College of Agriculture and Life Sciences, the four Brownes have gone in different directions from similar beginnings. They have branched out to New York City, San Diego, Baton Rouge and even Belfast, Northern Ireland, and each one had different reasons for attending Cornell.

Although Michael Jr. credits his father's enthusiasm with influencing his decision, he had other reasons that led him to Cornell. "I had already chosen to attend Miami University of Ohio. Two weeks before football camp started, I decided to go somewhere different," Michael said. "I believed hanging around one train of thought would be stagnating, and I felt I had to open myself up to new ideas."

Changing from a major in biology to landscape architecture helped fulfill that. "I really enjoy drawing, and I have always been interested in natural systems, the environment and the human role," he said.

After graduation, Michael relocated to New York City. Employed by the city since September of 1987, he is a project manager in the Design Division of the Department of Parks. Michael manages consultant design work, which is contracted out, and in-house work that is followed from concept to completion within his office.

Although time consuming, Michael finds his job challenging and an opportunity to gain experience in drafting and management. "It is another step toward opening my own business.

While Michael felt that his father influenced his decision to attend Cornell, Mary found herself thinking about Ithaca only after her brother went there. "Michael had a great effect on me because I thought it would be cool to go to the same college as my brother," she said.

An excellent basketball player, Mary was also being recruited by many other schools, when she finally narrowed it down to two—Syracuse and Cornell. "I really wanted a more academic atmosphere. Syracuse would have been all basketball," Mary said. A major in business management and applied economics gave her the academic atmosphere she was looking for.

After graduation, Mary was not ready to settle down to a nine-to-five job and decided to travel. In September 1987 she left for a trip she won't soon forget. For seven months, Mary was a member of Team Satzenbrau, a professional women's basketball team in Ireland, sponsored by the Guinness Brewery.

Time in Ireland helped Mary realize her potential as an athlete that she felt was hindered by the coaching at Cornell. "Basketball was a negative experience at Cornell because of head coach Linda Lerch," she said. "Finally I had uninhibited performance."

Ireland wasn't all basketball games. Mary did a lot of travelling, and saw the country of her ancestors. "People were so generous. It was really neat to experience a culture outside the United States."

After returning to the U.S., Mary moved to Baton Rouge, Louisiana, where she works as an assistant buyer at Maison Blanche, the largest department store in the state. "My responsibilities lie in advertising, and that means a lot of running around to meet deadlines."

Mary hopes to travel more before settling down to a permanent position. "Life is too short not to try new things. Eventually I want to raise a happy family and possibly go back to school. But not too soon," she said.

Dorothy Browne has the travelling itch, just like her sister, but she didn't go to Cornell to follow Mary. "At the time, I applied because my parents wanted me to," she said. But after examining the course offerings, Dorothy felt she had found what she had been looking for.

"The food science program was really what I wanted to get into," she said. However, once enrolled Dorothy had what she called a "conflict of interest" with the program. "I realized what I wanted to do would require a PhD, and I didn't want to attack that kind of schooling, so I switched to communication and business through the gener-
al studies program," she said.

When she graduated, Dorothy had one thing in mind. Go somewhere warm! "After Ithaca winters, can you blame me?" she said. She chose San Diego after spending the summer of 1987 in Los Angeles. "San Diego was perfect. It's not a big city, it's near the beach, and I already arranged for a place to stay."

Once settled in Southern California she began her search. After a month of not finding anything in her field, she took a job as a hostess in a Mexican restaurant. "I was running out of money and I needed a job. I met a lot of people and it was fun, but I was getting nowhere fast."

She quit her hostess job before going home for Christmas, and decided that if she did not have a job within two weeks after returning, she would move back home. "I went back to San Diego, with nothing waiting for me. The day I returned I got a call from someone I interviewed with before I left, and she offered me a job."

For four months Dorothy has been an administrative assistant with the Linda Goldzimer Group, a consulting firm that specializes in customer service analysis. "I design the teaching materials used, make appointments and schedule services," she said. "I love it. I am my own boss, and I find that I draw a lot on skills that I acquired through my course work at Cornell. I don't know how long I'll stay in California, but my office is one block from the beach, if that tells you anything."

While Dorothy is sunbathing, Joseph is braving the Ithaca winters she left behind. He also believes that his family had a great deal to do with his attending Cornell. "Everyone else was here, so why not?" Joe said.

Joe is a member of the Army ROTC program at Cornell. He chose this route for a variety of reasons. "Not only did I not wish to place the burden of tuition on my parents," he said, "but I saw a golden opportunity to increase my understanding of myself and my country."

Although he is still in school, Joe has made many changes in his life recently. In the past year he changed his major from agricultural engineering to landscape architecture. "I never wanted to be an engineer, but I didn't know what I wanted to do."

After watching his brother go through the landscape architecture program, and learning something about it, Joe decided to change his major. "I like integrating man into the environment. This was the place to go."

The big question is how Joe will use his major when he is given his commission. Graduating in 1990, Joe will be a second lieutenant with a four year commitment. He is curious to see where he will be posted. "I will probably go into the army's Corps of Engineers. I don't know what they will do with me from there."

For one year all four of the Brownes were at Cornell together, and most of the time they felt it was the best decision. "It was great. I am really glad they were here," Joe said. "It was like an extension of living at home, but only seeing each other once a day."

Even though they are now many miles apart, they are closer now because of the time they spent in school together. The experience gave them an opportunity to get to know each other in a different atmosphere, and they are happy it happened that way. "In the long run I think it brought us closer together than we would have been if we had gone to different schools," Michael said.

Joe summed it up the best. "It was great, but I wish we had another year together."

The Brownes pose for a family portrait; from left, front row, Michael, Mary, Dorothy and Joseph. Behind, parents Michael and Betty.
Counting
BIRDS

BIRDWATCHERS OF AMERICA, GET ready to sharpen your eyesight and your number two pencils. This winter, you could join the more than 10,000 birdwatchers across the United States and Canada who will be counting chickadees, sparrows and other birds feasting at their feeders as a part of Project FeederWatch.

Participants count the maximum number of individuals of a particular species seen at one time over a two day period. The results from twenty weeks of observation are then recorded onto a supplied computer-readable form, like those used in standardized tests. “The results are fed into the PC (personal computer) so no one has to sit in front of the computer inputting data,” said Greg Butcher, Director of Bird Populations at the Cornell Laboratory of Ornithology.

FeederWatch was developed in 1987 when a Canadian researcher, already involved with a similar project in Ontario, asked persons in the Ornithology Lab if they were interested in extending the program to include all of North America. “We had been thinking about starting such a project so we were sensitive to the idea from the start,” Butcher said.

In the first year FeederWatch had about 4,000 participants. As the program began to gain recognition, the number increased to 7,000 the second year. With that many birdwatchers on the job, it is no wonder that participants observed over 240 different species.

One of the species reported seen most often in the states during the first year was the pine siskin. In the winter of 1988-89, however, reports of these birds decreased dramatically. Although there is no conclusive evidence to explain this decline, Canada may have drawn the birds because of a good crop of seed cones, a food source for the birds, Butcher said. Another previously abundant species, the evening grosbeak, showed a similar decline.

One way those at FeederWatch determine what may be the cause of changes in bird behavior is to provide the birdwatchers with a form on which they describe their backyard, foliage, feed type and other descriptors which help to clarify the kind of environment the birds are feeding in. Dr. Erica Dunn, the Canadian researcher who instigated the FeederWatch project, has been working with this demographic data to determine habitat and food preferences of specific species. Once enough information is known about a given species, interested birdwatchers who wish to attract species that previously had not frequented their feeders can obtain helpful hints from FeederWatch such as planting a favorite tree type or putting out a certain type of feed.

The winter is quickly approaching and soon it will be time to fill feeders. Anyone interested in birds and bird-watching can participate in Project FeederWatch. A prospective FeederWatcher sends $9.00 to cover the cost of postage and mailed material to the Cornell Laboratory of Ornithology and he or she will receive eleven forms to be filled out in a 20 week span. All that is left to do is to watch and make note of what is being observed. In addition, each participant receives four newsletters from the Ornithology Lab which include feeder species information.

Butcher predicts a good future for Project FeederWatch. “I would say the three biggest outdoor hobbies are gardening, fishing and feeding birds.” The increasing number of birdwatchers every year means more help for FeederWatch. “I would estimate that about one-third of the people in the country feed birds.” With that kind of help, no bird in North America should go uncounted.

by Gayla B. Pollock '89
IN THIS ERA OF SURPLUSES IN PRODUCTION agriculture, a shortage of students who are interested in studying agriculture in college has developed recently. At three different campuses across New York, State University of New York (SUNY) agricultural and technical schools have dropped their agriculture programs because of declining enrollments.

The SUNY colleges at Farmingdale, Delhi and Canton have all but eliminated their agriculture curriculums in the last two years. Each has maintained programs in veterinary science technology and other agricultural related fields like horticulture and environmental forest technology. All three schools have dropped agriculture from their titles and are now called SUNY colleges of technology. Agriculture programs remain at Morrisville, Cobleskill and Alfred, although Alfred has changed its name to SUNY College of Technology at Alfred.

The reason for these cutbacks in the ag programs is the low enrollments at the three campuses. Enrollment at the agricultural and technical colleges declined 12 percent from 1980 to 1987. “We made every effort not to drop agriculture, but you just can’t afford to run a program with so few students,” said Leigh Wilcox DVM ’75, Dean of Agriculture, Life Sciences and Public Service at SUNY College of Technology at Canton.

The elimination of the agriculture curriculums at these schools could hurt the agriculture industry in New York state. “I wonder where we’re going to get our middle managers in the future,” said Professor Wayne Knoblauch, a specialist in farm business management in the Department of Agricultural Economics at Cornell. “The two year schools have been an important source for the middle management positions on the farms and throughout the whole industry.”

Administrators foresee heavy competition for agriculture graduates in the coming years. “There’s a high demand for graduates in all areas of agriculture, across the board,” said Daryle Foster ’72, MS ’75, PhD ’85, Director of Cornell University Instructional Materials Service, which supplies teaching materials for agriculture curriculums at both the high school and college level across the state.

The loss of the agriculture programs will hit hardest in the immediate area of the schools that eliminated their ag programs. “Dropping agriculture at Canton is going to hurt. St. Lawrence County is the biggest dairy county in the state and now Canton doesn’t have a dairy program,” said Steve Aldous ’90, SUNY Canton ’88.

The loss of programs may also discourage some students from pursuing further education in agriculture. “Many students from this area worked on their home farms while attending school,” said Wilcox. “Without an ag program at Canton, many will lose the incentive to continue their education.”

The dropping of ag programs could cause a migration of agriculture graduates. “If students from those areas go elsewhere for their education, they might not return to work in those areas,” said Foster.

Not everyone anticipates a large impact because of the program cuts. “There won’t be any great impact in this area since the number of agriculture students was so small,” said Dr. William Gehring, Assistant Vice President of Academic Affairs at SUNY College of Technology at Delhi.

The root of the problem can be found in vocational agriculture (vo-ag) at the high school level. The trend in enrollments in vo-ag programs in New York resembles that of the agriculture and technical colleges. The number of vo-ag students dropped from 9,217 in 1983-84 to 7,991 in 1986-87. Vo-ag students often continued their education at the two-year ag programs. “We’re not stimulating high school students to choose agriculture as a career and they don’t realize that it’s a worthy field,” said Gehring.

“It’s an image problem,” said Foster. “People have the idea they can’t make money in agriculture.” This image coupled with other prevailing factors has resulted in the lower enrollments. The two main causes for this trend are the general decline in the number of college-age students and the bad press agriculture has received nationwide,” said Randy Stewart ’73, Transfer Coordinator for Admissions at the College of Agriculture and Life Sciences at Cornell.

With the need for more and more skilled people, New York agriculture must cope with the declining student population and the elimination of ag programs. The agricultural and technical colleges that remain have helped to pick up the slack from the loss of the other programs. “The future is bright for the remaining ag and tech schools. The demand for graduates will increase and salaries will be higher,” said Foster.

The good news is that the number of applications for the College of Agriculture and Life Sciences at Cornell has been increasing in recent years. “There are many areas beyond production agriculture where there will be a high demand for trained people,” said Stewart. “It’s part of our job to get the word out about the opportunities in the agricultural industry.”

by Thomas W. Cosgrove ’90
ONE HUNDRED YEARS AGO THIS month, the cornerstone of McGraw Tower was set into place, beginning the 172-foot tall obelisk that has become one symbol of Cornell University. Although many students still refer to this landmark as "the tower," there are several other spires that have made their mark on Cornell history.

According to Cornell University Archivist Gould Colman '51, PhD '62, the tower used to be a symbol of civilization and authority. "You weren't in touch with western culture until you had a tower," Colman explained. "Cornell University combined the western European traditions with the new industrial culture. The towers were one way of bringing some of the European civilization to Cornell. When McGraw Hall was built, you could see it from miles away, just like the old European cathedrals."

The first major steeple built at Cornell is the tower on McGraw Hall. Built in 1869, this tower was part of the original "stone row" and was the original home of the Cornell chimes. At that time, there were four clock faces that have since been covered over.

According to Frederick Marcham PhD '26, professor of history, the bells on top of the McGraw Hall tower were once used to regulate the lives of Cornellians. "The bells controlled when people got up in the morning, when breakfast began, when they went to chapel, everything. It was called 'The Rule of the Bells,'" Marcham explained.

"This only lasted for a few years, because students objected to the discipline; it was like being in the military."

The spire on McGraw Hall is now only occupied by pigeons. "They closed it off years ago, but the architecture students keep on trying to get up there around Dragon Day to put up banners. It's like a war. The university puts up new locks, and the architects keep on finding out how to get around them," Marcham said.

In 1891, the building that is now called Uris Library was completed, along with the 172-foot McGraw Tower (not to be confused with the tower on McGraw Hall). This tower became the new home of the Cornell chimes as well as a new clock.

The Cornell chimes are a set of 19 bells rung by a two-tier wooden console. There is a microphone at the top of the tower that transmits the sound of the bells to a speaker on the veterinary medicine building on the other end of campus. Three concerts are played on the chimes every day by student and volunteer Chimesmasters. "The chimes are really hard to play," said former Head Chimesmaster Shoko Sakai '89. "Since you use both hands and one foot to play them, you get physically tired after a concert."

North Baker Tower was erected in 1926 as part of a war memorial to the men of Cornell who died in World War I. This tower was endowed by the Quill and Dagger Senior Honor Society to commemorate its members who died in the war. The top of the tower with its ornate glass windows and vaulted ceilings is still used by Quill and Dagger as its headquarters.

At one time, Franklin Hall (now Tjaden Hall) and Sage Chapel also had towers. "Sometime during the '60s, these towers were removed during a university austerity program. It seems that it was cheaper to have them removed than to repair them," Colman recalled.

Bradfield Hall, the most recent tower on campus, was completed in 1968, and is the home of the Department of Agronomy and its meteorology unit. This eleven-story building is the tallest at Cornell and towers over the ag quad. Few windows break up the sheer vertical walls of the dominating brick structure because it was designed to be used as laboratory space. This makes its height seem even more impressive, like the outer walls of a medieval fortress.

The recently completed Performing Arts Center sports a small, symbolic marble tower, which rises high above Collegetown. With Cornell's rapidly increasing need for on-campus classroom, office and laboratory space, it seems likely that there will be more tall buildings like Bradfield built in the future. If Cornell wants to remain at the top of higher education, there is nowhere to go but up.
long before cornell university towered above Cayuga Lake's waters native Americans were tilling the soil, hunting wild game and fishing in the nearby waterways. The Cayugas, after which the lake is named, for centuries maintained a distinct culture and a unique society along these shores.

Ithaca lies within Tompkins County which was once almost totally within the Cayugas' dominion. The Cayugas were one nation of six in the Ho-De-No-Sau-Nee (Iroquois) Confederacy. The Seneca, Cayuga, Onondaga, Oneida, Tuscarora and Mohawk nations stretched from west of the Great Lakes eastward and north to include all of central and northern New York state.

On a local scale, the Cayugas learned through centuries of experience how to use the fertile soils and abundant natural resources of this region. Cayuga women cultivated a variety of crops ranging from gourds and beans to pumpkins and squash. However, corn was the Cayugas' most precious crop.

While the women were managing their fields, homes and children, Cayuga men spent much of the year on hunting expeditions, travelling well worn paths. One such path was the Taughannock Trail that began in Ithaca, and meandered up to what is now Taughannock State Park. Another was the Ithaca-Dryden Trail, an ancient footpath that connected the two establishments. Spencer Road used to be part of the old Danby Trail which left Ithaca and ascended South Hill on its way to Danby.

Interestingly, it was not the hunter who came back and assumed leadership of the home. Women were essentially the head of the household in their maintenance of domestic life. In addition, their political significance was highly respected by the male hunters and warriors. Power to nominate clan chiefs and arrange marriages rested with the women. However, Stephen Fadden '88, a Mohawk and a Cornell graduate student, said, "Women were not superior. It was a necessary way to maintain a societal equilibrium."

Although domestically liberated by today's standards, the Cayugas' form of government was like ours, a democracy. Professor Robert Venables, a visiting professor in the Cornell African American Studies program, said the Ho-De-No-Sau-Nee governmental philosophy and history influenced the United States Constitution. According to Fadden, "... the Ho-De-No-Sau-Nee had a great influence on the thinking of some of the founding fathers."

The governmental seat of the Ho-De-No-Sau-Nee is still the Long House located near Syracuse in the Onondaga nation. The Cayugas sent ten Sachems (senators) to represent their nation in the Long House or Grand Council of Ho-De-No-Sau-Nee.

However, the Cayugas' nation, after having maintained itself for centuries, was undermined in less than a decade. Not long after colonists began settling in the area, the Revolutionary War erupted, uprooting many Native American tribes, including the Cayugas, and changing their way of life forever.

In 1777, the Cayugas and Senecas pledged their loyalty to the British in hopes of keeping the colonists from settling on their land. In that same year, the British lost a major battle at Saratoga and decided to move their troops southward toward Virginia. "This left western New York state in a condition of guerrilla warfare with only loyalist troops, a few British troops and German mercenaries left to face the colonists," said Venables. Unfortunately, those native Americans who remained loyal to the crown, also had to fend off the colonists.

In March 1778, after having seen land snatched illegally from them in the 1750s, the Cayugas and Senecas attacked Wyoming Valley, Pennsylvania and killed more than 340 patriot soldiers. Immediately following this attack, George Washington commissioned General Sullivan to "... cut off their (Cayugas and Senecas) settlements, destroy their crops and inflict on them every other injury which time and circumstances would permit." However, Venables claimed that Philip Schuyler advised Washington to "... hit the Indians before they hit the patriots," a year before the Wyoming Valley incident, and that this event was a timely excuse for Sullivan to attack.

General Sullivan was successful in destroying most Cayuga settlements, and it is said that smoke from burning villages filled the sky on both sides of Cayuga Lake. The Cayuga nation never recovered. A few determined members returned to their homeland in 1784 only to leave in 1795. The last privately owned Cayuga land was bought by New York state in 1807.

Today Cayugas are scattered across New York state and the nation. Some reside on the Onondaga and Seneca reservations, and a few others live in Oklahoma and Ontario, Canada.

According to Venables, New York state is considering developing a reservation for the Cayuga nation. One proposed site is in the Samson State Park on the western shores of Cayuga Lake. Ironically, right across the road lies the United States Seneca Army Depot.

by Katherine H. Hill '89
EACH YEAR HUNTERS AND BIRD admirers rejoice as hundreds of thousands of Canada geese descend on the east coast during the winter months. Changes in the migration of the geese have occurred, however, and they do not fly as far south as they once did.

"If you live in southern states like North Carolina or South Carolina, you simply do not see the numbers of geese wintering there that were present 20 or 30 years ago," said Richard A. Malecki, a waterfowl research biologist who is stationed at Cornell. "This decline has occurred even though the Canada goose population has been steadily increasing," he said.

To examine the issues that are essential to the long-term management of Canada geese in the eastern United States, biologists are making an effort to determine what is happening along the migratory path of the birds and why. A six-year study that began in 1983 is coordinated by Malecki, who is an assistant leader in the U.S. Fish and Wildlife Service's New York Cooperative Fish and Wildlife Research Unit with a courtesy appointment as an associate professor of natural resources at Cornell.

To gain a clearer picture of the changes occurring in the migration, distribution and survival of eastern Canada geese, Malecki and other federal and state wildlife biologists trapped and fitted geese with legbands and neckbands. Subsequent observations of these marked birds are giving scientists an idea of how many geese there are, how long they live and where they are located at different times of the year.

"The results of our study are giving us information needed to refine the management of the Canada goose. From this we can make hunting regulations to manage the population in different regions," Malecki said.

The Canada goose is one of six species of geese common to North America. The white cheek patch and dark color of both male and female Canada geese make them easily distinguished from other geese.

Breeding areas, migration paths and wintering areas of eastern Canada geese are contained in a collection of states and provinces that make up what is known as the Atlantic Flyway. Stretching from northern Quebec to South Carolina, the Atlantic Flyway is one of four flyways in the country.

Biologists estimate that the Canada goose population in the United States exceeds 2.5 million. The Atlantic population of Canada geese, which includes geese found in New York, is one of the largest in the country and consists of about 35 percent of the nation's Canada geese.

When cold weather signals the approach of winter, flocks of Atlantic Canada geese leave their breeding grounds in northern Quebec for a warm climate. Two major migration routes mark their movement from their breeding grounds to their wintering spots. One runs southward along the east shores of Hudson and James bays through central New York towards the east shore of Maryland. Another route extends down Canada's Labrador coast to the Maritimes, where the birds join geese from Newfoundland and continue along the New England coast across Long Island and down to New Jersey and other points along the Atlantic coast.

"Geese that pass through New York state leave their breeding grounds in mid-September to early October and reach their wintering area around the Chesapeake Bay by mid-November," Malecki said.

Places like the Finger Lakes region of New York that used to be too far north for wintering birds have seen substantial increases in the numbers of Canada geese during the winter. A change in the diet of Canada geese appears to be a major cause of the northern shift. The geese, which have previously fed on aquatic and moist soil plants, have turned to waste grains such as corn and soybeans to supplement their diet.

"These grains have a high energy con-
tents that allow the geese to withstand the more severe winter temperatures of a northern climate," Malecki said.

More grain is being grown in northern areas of the Atlantic Flyway than before. Canada geese can feed on the four to five bushels of corn, or other grains, that are estimated to spill from each acre harvested.

Hunting pressures may also contribute to the northern shift of wintering Atlantic geese. Canada geese that migrate farther south than other wintering geese are more apt to be shot by hunters because of the great demand for the small number of geese there. Malecki said that over the years, many of the birds that traveled farther south have been removed from the population.

From 1983-85, Malecki and his colleagues trapped and marked Atlantic Canada geese on their wintering grounds. They continued trapping and marking geese from 1986-89 on the birds' northern Quebec breeding area. Over 25,000 Canada geese have been trapped and marked with legbands and three-inch-wide yellow neck collars that have black number and letter codes printed vertically on them. Malecki said observations show the geese are not usually harmed by the legbands and collars, which are designed to fit the goose loosely.

The biggest concern of biologists is that the collars occasionally collect ice and cause a goose to die. Because of this, the collars have been modified continuously during the study to make them more resistant to ice. Their use is restricted to situations when other techniques are not available to obtain the desired information, Malecki said.

In Kuujjuaq, a town located on the Ungava peninsula in northern Quebec, Malecki's group used a helicopter to herd family groups of Canada geese, which were flightless at that time, into a netted trap. All birds were marked with legbands while only adult geese were banded with collars.

"A big part of the study is completed," Malecki said. The final three-week session of trapping and marking was done in mid-July of 1989.

Observations for the study, which Malecki described as "one of the largest of its kind," will be taken until the spring of 1990. By May of 1989, over 150,000 reports of banded geese were received from conservation agency employees and bird watchers.

Observers can read the collars in the field by using binoculars and spotting scopes. People who observe marked geese are encouraged to report their sightings to their state waterfowl biologists or to the New York Cooperative Fish and Wildlife Research Unit, Fernow Hall, Cornell University.

Information gathered by Malecki's study will add to data used to set hunting seasons and to monitor harvest trends of the Canada goose. Hunting is the largest factor influencing the management of Canada goose populations today, he said.

"Every year 400,000 to 450,000 Canada geese are killed by hunters," Malecki said. "You can allow the harvest of so many geese without hurting the population only if you have information on their population dynamics," he said.

The rise in the population of the Canada goose in recent years brings along an increasingly complex problem of providing both a maximum number of geese and quality recreation opportunities for hunters, Malecki said.

by Kristine M. Surette '89
DOES YOUR MAJOR MATTER? THIS was the topic of a debate sponsored by the Cornell Chapter of the Public Relations Student Society of America (PRSSA) at its annual banquet on Sunday, April 16, 1989 at the Sheraton Inn and Conference Center in Ithaca, New York. Public relations professionals debated whether a professional major or a liberal arts major is the best preparation for a career in public relations.

Monica Cseri '82, a Senior Account Executive in the Healthcare Unit of Burson-Marsteller, New York City, spoke in favor of the professional major. After graduating from Cornell as a consumer economics major with a concentration in food and nutrition, she worked in the marketing and public relations fields. As a preparation for a career in public relations, Cseri said, "A communication major or a professional major such as consumer economics is better than a liberal arts major." She supported her argument with reference to other professional points of view.

Cseri quoted Harold Burson, Chief Executive Officer and founder of Burson-Marsteller, the world's second largest public relations firm, as saying, "The cornerstone of any successful career is the ability to communicate."

A colleague of Cseri's at Burson-Marsteller said her communication background brought everything she studied together under one umbrella. Cseri added that a communication major provides a framework for knowledge on other topics in liberal arts, hotel management and so on.

"The Public Relations Society of America (PRSA)," Cseri said, "recommended that students who want to work in public relations should do three things: take a well-rounded program, minor in business and take their remaining classes in liberal arts." Cseri said that students should not take all classes in one area. She said, "Public relations is about counseling on all subjects and about management of communications with customers, unions and other publics."

From her communication and marketing courses she learned much of the "lingo" involved with her career. While some public relations agencies may offer training programs, many do not. Cseri said that the mechanics, such as writing speeches and press releases, could be learned on the job but "knowing the mechanics before being hired gives you one less thing to worry about." In conclusion, she said, "The bottom line is to major in something you enjoy and are good at."

Helio Fred Garcia, Managing Director of the Sawyer/Miller Group, advocated a liberal arts education as a better preparation for a public relations career. His education includes a BA in politics and philosophy from New York University and a MA in philosophy from Columbia University.

Garcia began his presentation by asking the audience to accept three radical propositions. First, he said, "Public relations is not about communication, but about persuasion." He said that public relations is not news releases or channels of communication. "Too often we concentrate on the medium and not on the message," Garcia said.

His second proposition was that the most valuable asset of public relations was a point of view. "Public relations will succeed when it demonstrates a point of view," Garcia said. "The question is, which point of view?" He added that a point of view will bring perspective to bear on a client's problems and enable the client, company or institution to see "the big picture."

Third, Garcia said that public relations people are valued not for what they studied but for what they know. "The mechanics of public relations are necessary," he said, "but not sufficient." Adams & Rinehart, a financial public relations firm that Garcia worked for previous to his position with the Sawyer/Miller Group, administers writing tests to all its applicants and has an active training program. Most of the individuals hired by Adams & Rinehart are psychology, English literature and history majors.

Garcia's advice for pursuing a career in public relations was, "First, learn a lot about something very specific. Begin in any subject as long as it is intellectually rigorous and add to this with your own point of view." Next,
Christopher Whittle, a senior lecturer in the communication department and the professional advisor to the Cornell Chapter of PRSSA, said, "Because you do not know from month to month what kind of an account you will be working on, it helps to have the intellect to move from one account to the next." He felt that Garcia was not familiar with the current communication programs. "Modern communication majors, based on the social sciences, are as intellectually challenging as any liberal arts subject," Whittle said. If students want to go with a liberal arts major only, "They do not have to worry because they can always go to night school for the next five years," he said.

Although Cseri and Garcia were supporting different majors as the best preparation for a career in public relations, their arguments were similar. Both speakers felt that if individuals had a broad education in a variety of subjects, a concentration in one area and a knowledge of the mechanics of public relations, they would be prepared for a career in the industry. There is not one "right way" to train for a position in public relations, they said.

Beth Fisher '84, a Senior Account Executive for Regis McKenna in Palo Alto, California, was not a part of the PRSSA debate, but in a telephone interview, said an individual pursuing a career in public relations could do one of two things. "For one, you can major in a discipline such as history or the sciences with a concentration in communication. A second alternative is to major in communication with an emphasis on something else."

Fisher majored in communication before moving on to work in public relations in the "high tech" industry. She said individuals wanting jobs in a field similar to this should "have a communication major and a concentration in electrical engineering, mechanical engineering or computer science."

So, what is the best preparation for a career in public relations? Individuals must make up their own minds as to which career path is best for them. Whether students choose a communication or liberal arts major may not matter as long as they have an understanding of public relations and an intellectually challenging education. The industry is paying for people who can think, Cseri said. 

by Ingrid K. Storer '89
FEW PEOPLE ENJOY CHANGE. FEW can turn their backs on the familiar to embrace the new without some semblance of guilt or regret stirring inside. Changing one's major field of study, moving into a new house or even switching jobs requires patience, perseverance and an ability to adjust.

Now picture this: in the midst of your grand struggle to adjust to all of the above, you must also pick up and resettle in another country? Staggering prospect, isn’t it? Well, hundreds of members of the Cornell community, both students and faculty, do exactly this every year. And they do it by sticking together.

At last count, Cornell’s International Students and Scholars Office (ISSO) listed over thirty campus cultural and national groups in its official register. These groups, ranging from less than 20 to over one hundred in membership, afford their members an opportunity to acculturate to the United States and to live at Cornell as a group without sacrificing their own sense of culture and national heritage.

“Culturally speaking, belonging to a national group eases the adjustment period,” said Ariel Rivas, a graduate student. Rivas and his wife Maria belong to the Latin American Student Organization. “It’s nice to be able to speak your own language once in a while,” he said.

Each group differs in the manner in which it organizes its time, the frequency with which it assembles and the nature of activities it plans. For instance, the fledgling Japan-United States Association (JUSA), founded just last semester, gears its events toward educating Americans about Japan, the Japanese way of life and Japan-U.S. relations. JUSA also differs from most other campus cultural groups in that many of its members are not Japanese, but are merely interested in the culture. “We’ve got a lot of East Asian Studies majors, and some people from Japan who are just learning English,” said JUSA member Taka Go ’90.

Incoming foreign students are alerted to these special interest organizations through the efforts of the ISSO staff who begin prepping students even before they leave their native soils. “First we encourage the prospective colleges or departments of the incoming students to send each a personalized letter,” said ISSO Director Jerry D. Wilcox. “Then we send a pre-arrival package containing information on how to get here, what to bring, immigration procedures, expenses, visas and such.”

Once the students arrive, the ISSO sets up orientation activities which, among other things, introduce the various international groups. If a student’s country is not represented by a campus organization, the ISSO will locate people on campus from that person’s native land.

Because there are so few students from Tunisia at Cornell, and therefore no related group, Tunisian graduate student Sami El-Borgi turned to the ISPB (International Student Programming Board) for involvement. El-Borgi describes the ISPB as an umbrella institution that offers coordination among the other national groups. “We’re just a bunch of people interested not in any one culture, but in culture in general,” he said. In fact, there are two Americans on the board, so there’s really something for anyone from any background at Cornell, according to Demetrios Anglos, a graduate student from Greece and an ISPB member.

One might assume that, by joining these culture-specific groups, international students are cloistering themselves, hiding from Americans and resisting healthy assimilation. Quite to the contrary, the members of the groups are eager to share their customs with any or all interested. In fact, a majority of the organizations marshal their forces each year in order to showcase their individual cultures and traditions in the form of International Week, which is organized and funded by the ISPB.

“The priority for International Week is to interact with Americans,” said Anglos, who is also president of the Hellenic Student Association. “It gives people an opportunity to present their civilizations,” he said. Anglos’ group participated in April 1989’s week by arranging a Greek Night complete with Greek food, folk-dancing and exhibits. “We wanted to give people a taste of how Greeks entertain themselves,” he said.

Similar to the Hellenic’s Greek Night, the Latin American Student Organization hosted a Latin American party featuring an eight-piece Afro-Latin band. Egyptian, Turkish and South Asian cultural nights with food, folklore and art were also arranged during International Week ’89.

“Based on my personal experience with other institutions, Cornell is very supportive of its activities, especially its international ones,” El-Borgi said. “And in a small town like Ithaca, without activities, you’d be dead.”

by L. T. Ryan ’90
CULTURE SHOCK—AN EMOTIONAL and mental disturbance caused by a change in environment. They warned me before I left for Spain that I'd be struck twice by culture shock. First, when I arrived in Madrid, and again when I returned to the United States. I didn't believe them.

Upon my arrival for an academic semester abroad in Spain, I experienced a mild case of culture shock that lasted a month. It was difficult to adjust to a world where I knew no one. I spoke Spanish, yet as the daughter of natives of Puerto Rico, my accent was different. However, you gradually learn about Spain.

Everything started later. Spanish lunch normally begins about 3 PM. No word for lunch exists in Spain. The term used is “la comida” which literally means “the meal.” La comida is the perfect term since it is the largest meal of the day. All over the country Spaniards will feast on the basic staples of their version of a nutritious meal. Generous portions of fish doused with tangy olive oil, a bowl of gazpacho (a delicious version of vegetable soup on the cool side) and plenty of white wine to wash it all down.

When la comida is complete, it is time for the afternoon siesta. “It’s a known medical fact,” my Spanish professor said, “you should rest after you eat a big meal.” The culture is designed solely for that purpose. Madrid shuts down from about 2:30 PM until about 5:00 PM. Everything closes—banks, stores, businesses and museums.

As you walk around the streets of Madrid during siesta, you witness a paradox in action. It is a city that closely resembles New York City on the face, yet has not westernized so far as to forget its culture. Respect remains for the old tradition of the siesta in the face of modernization. Spanish businessmen never understand how Americans work eight hours straight without a siesta. I started to wonder the same thing.

There is one exception to the siesta—the bars and cafes. These remain open until about 5 AM and operate uninterrupted by the siesta, with no days off. The bar is the hub of Spanish life. It is the social center, the living room away from home, the office conference room and more. The bar is where you entertain friends, conduct business, eat, drink and relax. Here is where you indeed discover Spain. Business is bustling around 6 PM when the Spanish national happy hour begins.

The scene is unmistakable. Behind the bar are a dozen or more sangria jugs and several goatskin wine bags dangle over the bartender’s head. Hanging from the ceiling are ropes of sausage and plump serrano hams. Voices shout to the bartender, glasses clatter in the background and cigarette smoke laced with whiffs of garlic, wine and cheese fills your nostrils.

Call out to the bartender what you want. Have a “tapa.” Tapas are small snacks to hold you over until dinner, which is usually at 10 PM. Tapas are just a small plate of your favorite food. The most popular tapas are olives, manchego cheese (really salty), sliced ham, shrimp, potatoes or just peanuts. Keep your own tab. When you ask these guys how much you owe them, you are expected to recite all the drinks you had that evening.

Wander and explore, and then wander some more. I spent many weekends at the Plaza Mayor, Madrid’s largest square. There are dozens of bars each specializing in a certain tapa. I never got to all of them. Wander some more, after all this is what the Spaniards do. Madrid is rich with diversity. Spend a day at the Prado museum, go to Retiro Park, see a flamenco show. The city never stops and the people go right along with it. Most weekend clubs will finally kick people still dancing out the doors at 9 AM!

“How were the bullfights?” That was the first thing everyone asked when I returned. Many Americans see bullfighting as a cruel sport, in which the bull is always the loser. Bullfighting is not a sport. Bullfighting is a staged performance, practiced and perfected.

As I sat in the Plaza de Toros bullfighting ring in Madrid, I couldn’t recall when I had ever seen such an exhibition of bravado. Fear was secondary in nature to these toreros. The memory that remains in my mind is the one torero who was swept off the ground by the bull’s horns and tossed across the ring. The man stood up furious with anger and charged at the bull. For Picasso, bullfights symbolized war and the ugliness of life itself.

Living in Spain allowed me to take a good look at the great land of the free and home of the brave without the rose colored glasses. For a few months, I was immersed in a culture where people weren’t focused on money and making more money.

They told me I’d be struck twice by culture shock. I didn’t believe them. I’m now experiencing my second case and this time, it’s not so mild. I miss the people who dance and drink to celebrate life. It seems that there are requirements to enjoying life in this strange place I’ve come back to. But, my mind rests assured when it remembers that there is a place that is different. Viva Espana!

by Margaret Ramirez ’90
Tolerating Pesticides

by Terese M. Angelastro '90

HOW SAFE IS OUR FOOD SUPPLY from pesticides? Did you know that a person would have to eat hundreds of pounds of apples treated with the pesticide Alar to reach an unsafe pesticide tolerance level set by the Environmental Protection Agency? Did you know that before a pesticide is released into the consumer food market it has undergone seven to 10 years of testing by at least 12 different state and federal agencies? Is public turmoil and confusion about unsafe pesticides in our nation's food supply justified?

Amy Schmitt '90, a public policy major in the College of Human Ecology, said, "You do have a say in what you buy and what you eat. If you don't trust the government pesticide regulation, use your own judgment as regulation. Go out and buy only organically grown fruits and vegetables." (In organically grown produce, no synthetic chemicals are added to crops, but natural toxicants are usually present.)

Susan Winde, an adviser for the National Pesticide Hotline based at the Texas Tech Health Sciences Center in Lubbock, Texas, said if consumers are worried about the effects of pesticide on produce, they can take matters into their own hands. She said, "One of the best precautions in avoiding pesticides is to only buy fruits and vegetables from organic farms. If someone feels insecure with pesticide use, knowing exactly where the produce came from and who grew it can often alleviate the problem." Winde suggested that fruits and vegetables be washed very thoroughly to further diminish effects of pesticide residues.

Donald Lisk MS '54 PhD '56, a professor of toxicology at Cornell, said relying on organically grown produce is not the total answer. "A lot of people are calling for organically grown produce. But if you didn't use pesticides, you still would have chemicals on crops from vehicle exhaust, industrial air pollution and other sources. You can't say something is pure and clean just because you cut off one chemical source." Lisk said everyone seems to oppose everything today from trash incinerators and car exhaust to landfills. He said people have reached a point where they no longer trust industry or the government. "This stems from catastrophes such as Love Canal, PCB contamination of the Hudson River, the Exxon oil spill and widespread radioactive contamination at federally-operated atomic facilities."

Lisk said pesticides are tested more than any other class of compounds, and they're tested more because they're made to kill. "No chemical can ever be made completely safe. You can kill a person with a teaspoon of table salt if he or she is on a low sodium diet and has a heart condition."

James Gillett PhD, Director of the Institute for Comparative and Environmental Toxicology at Cornell, said consumers have opposed pesticide use for over 20 years. He said consumers often see the regulation of pesticides as beyond their control and something that is imposed on them. They have no way to test pesticide safety themselves. "If food is bad, you can see it or smell it and then you can throw it out. But you can't see pesticides, and often a threat is perceived."

The amounts of pesticides on produce that consumers may be exposed to are regulated by the U.S. Environmental Protection Agency (EPA), the Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA). Gillett said pesticide control does not only include food, but environmental factors like air, water, wildlife and workers who transport and apply pesticides and handle the crops. Once a pesticide is released into the consumer market after seven to 10 years of testing, it usually has an economic lifetime of less than 12 years. During this span the pesticide is reevaluated at least once, usually after five years. Gillett said, "The application of this system is not perfect by any means, but the potential is excellent." Pesticides are monitored and registered by calling in data from companies to record adverse effects on workers, crops and consumers.

Gillett said most manufacturers see the process as tedious and burdensome. "All companies are required to provide information and lists of complaints to the EPA. Those who don't are severely fined." Gillett said the EPA does not do as good a job as he'd like to see them do in this watchdog function,
but that is because the lengthy and detailed registration process takes so many resources.

Pesticide tolerance levels greatly affect consumer health. Gillett said a pesticide tolerance level is the maximum amount of the active ingredient or its breakdown products in or on a crop as it leaves a farm. Storage, cooking, peeling and trimming further reduce the exposure to pesticides. The EPA, however, does not take these actions into consideration when setting its standardized safety levels. Because the EPA already provides the consumer with an "unquantified safety margin," any further action to wash or prepare produce treated with pesticides further diminishes residue effects.

The testing of a pesticide generally has three stages. First, the pesticide is tested to see that it works; second, the pesticide is tested to find the lowest dosage needed to do the job; third, the pesticide is subjected to tests and studies to determine effects of both short-term and long-term exposures to the chemical. The pesticide tolerance setting process is so detailed that it includes thorough analysis of how much a person in demographic and socioeconomic areas might be exposed to the pesticide. These divisions include 50 states and U.S. territories, four regional areas (northeast, north central, southern and western), four seasons, ethnic groups, infants (nursing and non-nursing), children (1-6 and 7-12 years), teenagers (13-19 years, male and female), males and females over 20, females (pregnant or nursing) and low-income families. Gillett said, "These data reflect unique eating patterns from which separate risk analyses can be generated."

Gillett said organic farming is not going to solve the problems of consumer uneasiness with pesticides. "Organic growing may provide crop scarcity with lower production and food that's not particularly palatable. People will have to buy food that doesn't look as good or keep as well." Gillett proposed not eliminating pesticides, but reducing them through a program called Integrated Pest Management (IPM). "IPM does not promote not using pesticides, but rather using them judiciously and at just the right time." He said food pesticides probably shouldn't be the biggest concern in the nation's food system because their use and limits are safely regulated. "Our food system is not perfectly safe, but the problem doesn't lie with pesticides. Bacterial diseases in cheese, fish, meats and poultry being shipped around the country cause much bigger problems."

As evidence in support of the success of pesticide tolerance level regulations, Gillett referred to recent cancer mortality rates and said age-adjusted rates are declining steadily, except for lung cancer. Due to the higher levels of chemical carcinogens that were present in the American diet 20 years ago, cancer rates should have risen in recent years. With tolerance levels, the government does not recognize regulated pesticides as a threat to public health.
A GARDEN OF THEIR OWN

by Roderick Ventura '90

"IT'S NICE TO GO THERE IN THE evening because I can see the sunset in the hills from my little 20 by 25 foot farm," said Mary Ann Coghill, a retired research associate in the School of Industrial and Labor Relations. Coghill, like hundreds of other Ithaca residents, is a backyard gardener without a backyard garden. She is one of the amateur farmers at the Cornell Garden Plots.

If you were in Ithaca and were to look across Hanshaw Road behind Cornell's Hasbrouck Family Housing during the summer, you might see some of these amateur farmers watering their tomatoes or harvesting their radishes on a piece of rented land no bigger than a racquetball court. These plots are distributed to anyone who wants one in early May by the Cornell Garden Plot Committee, a non-profit volunteer organization. "Our basic goal is to give a chance to people who want to garden," said Pat Elliot, chairperson of the committee.

For six dollars, one can rent a 500 square foot area of gardening land from May until November. Ten dollars will get a piece of land twice that size. The fee covers the cost of having the soil plowed and tilled each spring by Cornell University Farm Services and the purchasing of stakes to outline each plot.

About 200 plots are available on Blue Grass Lane just beyond Cornell's North Campus. Additional plots can be found along Ellis Hollow Road near East Hill Plaza, and off Mitchell Street at Cornell Quarters.

Some people garden on these plots because it is an inexpensive way to supplement their food supply. Others are just hobby gardeners without a garden of their own. "When my backyard became too shaded, my tomatoes didn't ripen," said Coghill. "I rented a plot on Hanshaw Road where there was 100 percent sunshine."

Originally called Victory Gardens, the garden plots were established after the second world war to promote personal gardening and food growing. The land is donated by Cornell University, but Cornell does not play any role in the garden plot committee's decisions. "Most people don't realize that you don't have to be affiliated with Cornell to get a plot," said Glenna Margaris, a member of the committee. "All they need to do is send in a request and wait till May when the plots are distributed."

"In 1975 during the recession, there was great interest in the plots because of a strong public interest in growing your own food," said Eileen Driscoll, former chairperson of the committee. Today this interest seems to have declined a little, she said. "Frankly, Ithaca's farmer's market makes a fool of you now," said Coghill. "You work all season to get some fresh tomatoes, then the farmer's market comes out with fresh tomatoes three weeks before you do." Despite this, Coghill said she would not give up working on her garden plot. "There were a lot of empty plots last year, but I hope more people will come out next time. It's discouraging to have a big empty weed plot next to yours."

In mid-summer the garden plots can be an odd sight. Except for restrictions on plastics and pesticides, there are no rules that gardeners must follow. Some plots have rows that go north-south while others have rows going east-west. Some rope off their plots with twine and others do not. What is grown varies from plot to plot. "All the regular stuff is grown," said Coghill. "Broccoli, cabbage, tomatoes, radishes—not too much corn, though. I guess it takes too much space in the plot. Plus the raccoons always get to it." Flowers are also very popular on the plots. "You'd think that people would want to grow stuff for home canning and eating," said Coghill. "But there are lots of marigolds and other flowers grown there."

A common problem facing these gardeners is how to keep their flowers and vegetables watered. Some gardeners drive up to their plots with garbage pails of water in the back of their car. "They scoop it out and spread it around," said Coghill. "But that's hard work. Others run hoses from a faucet by the nearby Equine Research Facility. I save half gallon milk containers to carry water in. I can fit ten in the back of my car. With a garden plot you can't be on vacation very long or else your tomatoes don't get watered."

Each year about 300 people apply for garden plots. "Plots appeal mainly to graduate students who are interested in saving money by growing their own food and other temporary residents who have no place else to garden," said Driscoll. "But I've known lab technicians, secretaries and research assistants who have had garden plots. There's a wide range of people interested in the garden plots." These people will probably continue to pay six dollars each May for a chance to become an amateur farmer.
Search Of Soil Scientists

WHERE HAVE ALL THE SOIL SCIENTISTS gone? The display case of the Cornell Soil Judging Team is jammed full of trophies, plaques and cups symbolizing the past success of the team. Upon closer examination of the brass plates mounted on each award, a discouraging trend becomes evident: interest in the Soil Judging Team at Cornell is declining.

Team members examine soil profiles to categorize soil according to texture, density, slope, drainage characteristics and other criteria. Beginning in the early years of this decade, Cornell's Soil Judging Team earned a national title, a national runner-up finish, three Northeast Regional titles and five regional second place finishes. In 1986 the team fell to third in the region, and fourth in the last two seasons.

With just one returning member from last year's squad, the team may not be able to compete this fall. Typically, four students form the Soil Judging Team in the fall semester to compete in the Northeast Regional contest. Maryland, Maine, Penn State, Delaware Valley College, Connecticut and Rhode Island are among the other schools competing with the Big Red in this region.

The top two schools from each region are invited to compete nationally. Without more student interest, there will be no need for another soil judging display case in the near future. According to Bill Waltman, a soil judging coach in the Department of Agronomy at Cornell, the low participation is due in part to a larger problem facing agriculture as a whole.

"Almost all ag schools have had lower enrollments over the last ten years," Waltman said. "The class of 1978 was about the peak for agronomy majors, but after that, with low pay scales and fewer government positions, people realized there were more lucrative fields to enter."

A problem Cornell faces that doesn't affect most other schools is that so many students transfer to Cornell from the other state two-year agriculture programs, especially from Cobleskill and Morrisville. Waltman pointed out the difficulty of maintaining participation levels if the majority of club members are here for just two years before graduating.

Despite the recent decline, Waltman said that the public's increasing concern for environmental/agricultural conservation planning and the recent emphasis on water quality issues may boost soil science's popularity. Agencies like the Soil Conservation Service (SCS) and Forest Service, as well as independent consulting firms, are seeking environmental scientists with training in soil science to handle problems such as house sewage disposal, low level radioactive waste sites and landfills.

The Department of Agronomy has also restructured the undergraduate curriculum to reflect the increased emphasis on soil resources and environmental issues.

Brent Schefter '91 is the only soil science major in his class, and the lone returning member of last year's Soil Judging Team. "The job market is wide open for people who specialize in this field," the North Dakota native said. "It's pretty easy for them to find good jobs. In most of my courses, there are only a few undergraduates. Yet, you can't flip open a newspaper without reading about a landfill polluting the ground water."

It is easy to see why Waltman, Schefter and others in the field are surprised at the lack of interest in the major and in the Soil Judging Team.

"Soil judging actually lets you see the soils as they really are, to understand the geology that caused soils to have the properties they have and to understand the agricultural and environmental limitations due to these soil properties," Waltman said. "Soil judging allows you to analyze whether the soil is deep enough for a septic system, good for establishing orchards or vineyards, ideal for building roads or just good agricultural soil."

The team is not limited to just agronomy majors or ag college students. You don't need technical knowledge of soils to participate in the team, Waltman noted, because soil judging tests an individual's power of observation. "People pick it up pretty quickly, because everyone has some ability to observe."

"The camaraderie is important," Waltman said. "Students on the teams make friends they will keep in contact with their entire lives." The Soil Judging Team offers a chance to get outdoors, experience nature, travel, get a step ahead of others in the environmental science field and have fun in the process. With support from more students, the team may someday need that additional trophy case.

by Don Cameron '89
MAKING THE CONNECTION

MOST COLLEGE SENIORS IN THE United States have two choices when seeking employment—on-campus recruiting or blind resume solicitation. Cornell University has a unique program, the Cornell Connection, which offers two additional job hunting opportunities. Seniors may attend any of the seven career fairs to network with alumni and employers. They may also access an extensive list of job openings across the country compiled by the Connection staff.

The Cornell Connection was started in 1984 as a result of alumni interest in helping students find jobs. An alumni committee was formed to target the job markets of heavily populated areas such as Boston, Washington, DC and metropolitan New York. Committees formed in those cities contact alumni and compile a list of available entry-level jobs.

“The response by both alumni and students was so great that in 1985 the program was expanded to include face-to-face contact between the two groups in an advisory and mentor capacity through the career fairs,” said Katy Noonan ’81, associate director of alumni programs in the Career Center.

The career fairs, which are held over winter and spring break, give seniors the opportunity to meet and spend time discussing careers with Cornell alumni from a wide range of companies and career fields. In 1989, over 700 students attended the seven fairs held in Los Angeles, San Francisco, Boston, Washington and New York. Three in New York covered financial services, publishing and advertising, public relations and electronic media. The Los Angeles and San Francisco career fairs included on-the-spot job interviews by companies interested in hiring the next year.

“The reason we do this is because many times companies from the west coast do not recruit on campus because of the cost factor. The career fair gives students interested in California an opportunity to speak with employers from the west coast,” Noonan said.

Jude LeBlanc ’88 attended the career fair in Los Angeles over winter break of his senior year. He met a representative from Interstate Bank of California. Three interviews later, they offered him a job in their management development training program. “Without the Connection, I might not have gotten a job out here because I didn’t know anyone,” he said.

In addition to talking to employers, the career fairs have an alumni component. In five of the fairs, students are matched with an alumni mentor whose career experience is similar to the student’s career interest. Alumni leaders plan and participate in every career fair.

“The personal relationships that students build with alumni are an important component of the career fairs,” Noonan said. “It enables the students to not only expand their job network, but obtain valuable career planning advice and guidance as well.”

The second part of the Connection is the computerized job listing which is the first of its kind in universities. In 1986 it won the College Placement Council’s Outstanding Achievement Award for innovative and creative use of a computer in college placement services. The job listing is used by over 900 students annually and can be accessed on all Cornell University Information (CUINFO) terminals. CUINFO provides students with information on various other topics as well such as exams, weather and events on campus. Students can also access the job listing on Cornell mainframe computers and in the career centers on campus.

The jobs are listed by both geographic location and career field. Each position has a job code for identification. Students send cover letters and resumes to the Connection office where they are forwarded to employers. The listing is updated every week with new positions.

While the job listing was initiated by alumni, it has expanded to include employers not affiliated with alumni contacts. Currently the listing includes over 1,500 jobs with small and large companies across the country. Most of these companies do not recruit on campus because they are not from the northeast, too small or cannot afford to recruit.

Joseph Gellert, president of Long Island Cheese and Specialties, Inc., believes the Connection is a great opportunity for both the student and employer. “I have listed with the Connection for the past two years and have been very pleased with the results. The two Cornellians I have hired are very impressive.”

by Deborah H. Lippert ’89
O'Connor Honored in Lectures
Rosemary Verey, noted British horticulture author, will speak at the first annual lecture of the Audrey O'Connor Lecture series, a series honoring Audrey Harkness O'Connor, the long-time editor and friend of Cornell Plantations. The Verey lecture will take place on October 5th, 1989. Donations to the fund honoring O'Connor are welcomed and should be forwarded to Linda Emmick, the Plantations public affairs assistant.

Gamma Sigma Delta Holds Award Ceremony
The Cornell University chapter of Gamma Sigma Delta, the International Honor Society of Agriculture, presented awards to honor those who have shown exceptional scholarship, innovative action and outstanding service to the cause of agriculture. Eight students, faculty and administrative personnel were honored at the awards banquet which took place on May 8, 1989 at the Holiday Inn of Ithaca. Of the many who were honored, Andrea J. Ritchie '90, a student in the College of Agriculture and Life Sciences received an award for showing exceptional ability in her studies. Richard G. Warner, a professor in the Department of Animal Sciences, also received an award for rendering outstanding service to agriculture, and Jan Olsen, the Administrative Director of Mann Library, received an award of merit for innovative administration.

Gold Medal of Horticulture Awarded to Gortzig
In recognition of his many contributions to horticulture in New York State, Carl F. Gortzig '52, a professor in the Department of Floriculture and Ornamental Horticulture in the College of Agriculture and Life Sciences, was named the eighth recipient of the New York State Gold Medal of Horticulture. In addition, Gortzig's name will be inscribed in the Horticultural Court of Honor located at the New York State Fairgrounds in Syracuse.

BAYOU Helps Minority Students
The Beginning Agriculture Youth Opportunity Unit Project (BAYOU), a program aimed at giving young people opportunities for involvement with the food and farming industry, brought four minority-group students from the southern states to New York this summer to investigate careers related to agricultural research. The USDA/ARS Germplasm Resources Unit and Cornell's New York State Agricultural Experiment Station cooperated with BAYOU, a program introduced through Southern University and A&M College and Supported by Cornell University and others. During the program which lasted for several weeks, three students worked at the Germplasm unit while a fourth worked in the Department of Plant Pathology. During their work the students gained experience in fundamental concepts and techniques in genetics and other aspects of fruit, vegetable and other agronomic crop production.

Research Center Established for Dairy Foods
Cornell University and the University of Vermont have joined forces to establish the Northeast Dairy Foods Research Center. The center's aim is to expand research on dairy products and food technology and to provide scientific, technical and marketing support to the northeast dairy product manufacturing industry. The center also plans to train many more scientists to work for the dairy industry. David M. Barbano, an associate professor in the Department of Food Science in the College of Agriculture and Life Sciences and a specialist in milk chemistry and processing, was appointed director of the center at its inauguration ceremonies held at Cornell University.

Scott Given Award
The American Society of Agricultural Engineers (ASAE) honored Norman R. Scott PhD '62, vice-president for research and advanced studies, with the 1989 Henry Giese Structures and Environment Award. Scott was honored for his work in applying physical and biological principles for the environmental design of animal shelters. The award was presented at the society's international summer meeting which was held at the Quebec Municipal Convention Centre in Quebec City, Canada. Scott, who has collaborated with animal scientists and biologists all over the world, also assumed the position of technical vice president of ASAE during the meeting.
THE MILK CHALLENGE

WATCHING YOUR WEIGHT? KEEPING TABS ON YOUR BLOOD PRESSURE? WITH SO MANY PEOPLE OPTING FOR FISH OVER RED MEAT AND CHOSING SKIM MILK INSTEAD OF WHOLE, IT WAS ONLY A MATTER OF TIME BEFORE THE DAIRY BUSINESS MET THE NEW GENERATION. A NEW PROCESS, SIMILAR TO DECAFFEINATING COFFEE, CAN REMOVE 85-90 PERCENT OF THE CHOLESTEROL FROM MILK AND CAN "TAILOR MAKE" MILK PRODUCTS.

Professor Syed S.H. Rizvi in the Department of Food Science developed supercritical fluid extraction, which injects high-pressure carbon dioxide into butterfat. The carbon dioxide "collects" the cholesterol and, with the altered butterfat, the milk becomes "de-cholesterolized" two percent milk (two percent of the milk is butterfat). Rizvi said the process itself does not affect the flavor or nutritive value. Because cholesterol has no flavor, milk lovers will not even notice the decreased amount of cholesterol.

"People don't like skim milk as much (as two percent or whole milk). Whole milk has more flavor because of the butterfat," Rizvi said. Whole milk has 3.3 percent butterfat and about a quarter to a half percent (532 mg) of that is made up of cholesterol, a substance that can cause clogging of the arteries and produce heart disease. The maximum recommended dietary intake of cholesterol is about 300 mg.

While making further improvements in the process, Rizvi and his research team plan to find out how expensive his extraction process would be on a larger scale. "My very crude calculation would put the cost at about 15-18 cents more per quart of milk," Rizvi said.

Another aspect of Rizvi's development could increase milkfat use, the cream taken out of milk to make butter, cheese, yogurt and ice cream. While recent trends have shown an increased consumption of some dairy products, Rizvi said he believes milkfat surplus could reach one billion pounds per year by the year 2000.

Milkfat, also known as butterfat, could be more competitive with other butters and oils and be in greater demand with the extraction process by changing the characteristics of milkfat, Rizvi said. "We could make many different cheeses, and a more spreadable butter. Coconut oil is used in many pastries. We can tailor the fractions of the milkfat to substitute milkfat for coconut oil."

Increasing milkfat use is as important as removing cholesterol, Rizvi said. Pulling out three samples, Rizvi pointed out that, at room temperature, one was almost a liquid, one slightly more solid and one quite hard. All three were milkfat, but they differed in their melting characteristics. The three types could be used for a more spreadable butter, in pastries and in candies.

Are there many companies interested in his extraction process? Rizvi pointed to a chalkboard with a long list of company names. "We've already been contacted by several of these companies," he said.

In addition to removing cholesterol and altering milk product characteristics, supercritical fluid extraction may be applied to other areas. Cholesterol-reduced red meat may boost the beef industry, and Rizvi is also looking into concentrating the most beneficial fatty acids found in fish oil.

According to Rizvi, the "million dollar question" asked is "When will these developments hit the market?" He said the answer is really up to the processors, and how eager they are to take on the milk challenge.

by Elizabeth J. Hujsak '90

Professor Rizvi, right, toasts his extraction process that reduces the cholesterol in milk and may increase milkfat use. David K. Bandler, left, helped evaluate the low-cholesterol milk.
About the Issue

We do not have a specific theme for this issue of the *Countryman*, but our focus is, as always, primarily on people, places and activities related to the College of Agriculture and Life Sciences. The articles in this issue are representative of the wide range of talents and interests held by the authors and the subjects they chose to write about. So, read on and find out what has been happening since our last issue came out—from lace to vegetables to cows to construction, there is a little bit of everything in this issue of the *Countryman*.
SUPPOSE YOU WANTED TO TEACH yourself a certain subject. Maybe you want to learn about insects in culture, or maybe you have a desperate need to know all about windsurfing. You would probably start by going to your local library to look up records, tapes and books. But there is so much material and not enough time to sort through it all. The whole process is not only time-consuming, but pretty boring.

Things would be a lot easier and a lot more interesting with a computer and an interactive learning program, a program designed to give you access to information about your subject while letting you control what, when and how the information is presented. More importantly, the program would allow you to learn the way your mind works best—by association.

Geri Gay, an assistant professor at Cornell's College of Agriculture and Life Sciences Department of Communication, along with a team of graduate students is supervising the research and design of these kinds of programs. The Interactive Multimedia Group, which Geri Gay directs, is a group dedicated to incorporating the idea of learning by association into the design of interactive programs.

These programs are Interactive Multimedia programs; they combine the three major communication technologies—print, audio and video. In effect, these programs are books with sound and moving pictures.

The idea of learning by the use of multimedia isn't a new one. In 1945, President F. D. Roosevelt's science advisor, Vannevar Bush, envisioned a machine that would store scraps of information via microfilm, information from notes, newspapers, documents, articles, books, you name it. Searching through information at breakneck speed, a person could find a specific piece of information in a book or document, link it to a related newspaper story and then perhaps find pictures associated with the topic.

Bush called this a Memex Machine.

This machine would allow one to link ideas together, to create a meaningful web of thought. What was only a vision in 1945 is now a reality.

The Interactive Multimedia Group at Cornell, with funding from IBM and Apple Computers and The President's Fund at Cornell, has completed some eight interactive programs, programs building on the ideas of Vannevar Bush. "German Murder Mystery" is a disk that provides clues for solving a murder while teaching the German language. "A Field Guide To Insects and Culture" provides a vast amount of information on insects in culture: everything from songs, TV commercials and film clips to biological and environmental facts about insects.

In both of these programs, different categories of information are organized in a house. Each room houses a different category. By simply touching the screen in the appropriate spot you can get into any room you want, "look" around and hone in on a specific display.

For instance, in "The Cultural Influence of Insects" program you may go into the music room to find out about insects in music. A picture of the composer Rimsky-Korsakov is sitting on the piano. If you touch the picture you can either get a brief biography on him, or you may just want to hear his song Flight of The Bumblebee. While you're there, you may want to create your own music by using the keyboard and the sounds of different insects provided for you.

In all of these programs there are human characters who serve to guide you through different rooms and give helpful hints and suggestions. These characters add a feeling of humanity and comfort.

As you can probably imagine, creating these programs is no easy task. A lot of work goes into production. According to Geri Gay, "Ninety percent of it is research and planning... It takes seven or eight months to put one of these programs together."

Gay oversees the long process of researching programs and concentrates on how the entire program looks aesthetically. She is concerned with making sure the program keeps a certain look and feel. "Programs must have continuity," she said.

"We bring students in on the beginning stages to find out if things are clear. We ask for feedback on what things they would like to see in the program," Gay said.

Steve Masiclat, a graduate student in the Department of Communication, is another member of the research and design team. Specifically, he works as an interface designer for the Macintosh system. "It's 20 percent drawing, 30 percent programming and 50 percent psychology," he said. "My concerns are getting good information graphics and making them easy to use."

The possibilities for programs like these are limitless. For instance, doctors will be able to match case histories with descriptions of diseases, diagnoses and possible drug reactions. Travel-agents could compile facts, pictures and articles about any place in the world.

All this is somewhere down the road. For now we stick to the basics. The main goal of Gay and her group of researchers and designers is to make interactive programs effective as tools for learning integratively.
Getting kids

by Julie Mazur ’90

AS 1990 APPROACHES AND WHAT some have called the “Decade of the Child” draws to a close, the time seems ripe to check up on our local children. What have our children gained and lost in the 1980s? Nationally, the losses might include larger classrooms, an increasing number of young drug users and the “latchkey kid” phenomenon. While such depressing trends have not left Ithaca unscathed, a closer look reveals local gains as well. Perhaps the most significant gain is the increased role of big brother/big sister programs in the Ithaca community; unique among these programs is Cornell’s Volunteers for Youth.

Volunteers for Youth (VFY) is a non-profit student organization designed to bring collegiate athletes together with local children. Although adopted at Cornell in 1977, much of the program’s organization and development has occurred in the last decade. VFY is now directed and staffed almost entirely by Cornell student-athletes. “The athletes are excellent role models for them and the kids love having a big football player as a friend,” said VFY Director Chris Cavolo ’91.

The tie with athletics began in 1977 when the National Collegiate Athletic Association (NCAA) agreed to sponsor the new Volunteers for Youth national program. In 1986, however, the sponsorship was discontinued and VFY programs nationwide became dependent on outside donors. “The kids are doing a great job on their own,” said VFY’s Cornell faculty advisor Andrea Dutcher. The program is virtually self-governing and the students appear motivated and organized, she said.

“VFY hasn’t really changed since the NCAA left,” said Co-head Director Julie Han ’90. “We’ve continued the athletic aspect because we know that the athletes will provide the type of commitment we require and because the kids love it,” said Han.

In the past, VFY directors have recruited volunteers each fall through various Cornell athletic teams. The program’s success, however, has spurred its directors to cut back on recruitment. “We’re limiting the number of volunteers this year,” said Cavolo. “We’re getting too big and it’s very important to keep this type of program on a personal level.”

According to Mary Whiting, coordinator of the Northside Community Center, about 60 children have been matched with VFY volunteers in the past four years. Whiting, also a VFY advisor, acts as a liaison between VFY and

the local children. “VFY had a group of volunteers interested in meeting the needs of people in the community,” said Whiting, “and we had a number of school-aged children in great need of big brothers and sisters.” VFY’s only requirement for the child is an age range between six and 14, she said.

According to Whiting, 90 percent of the children who attend Northside’s after-school day camp have big brothers or sisters; without VFY, many of them would still be on waiting lists for the Ithaca Youth Bureau’s One-to-One program, she said.

VFY requires its volunteers to meet with their matches every week for two or three hours, said Cavolo. “These kids need a friend they can trust,” he said, “and they can’t become friends if they don’t spend a lot of time together.” Several of the children come from low-income homes, Asian families who have recently moved to the United States or large families where they get lost in the shuffle, said Cavolo.

Crystal Howell, age eight, and her brother Luke Blackwell, age 11, are both involved in VFY. “Having six brothers and sisters can get pretty boring,” said Luke. “I like to go hang out with my big brother and he can help me with my schoolwork too.” Luke and his big brother meet every week, he said, and “Every time is the best time.”

Crystal has been Han’s little sister for two years. “I like it,” said Crystal. “I don’t have to stay at home all the time.” Han and Crystal meet once each week to make cookies, see a movie, go ice
n the game

Co-head director Julie Han '90 treats her little sister, Crystal Howell, to NY Cafe in Collegetown.

skating or simply talk. "I like getting her out," said Han. "She gets lost at home and I like giving her some attention," she said.

VFY Director Steve Hettrich '90 has also been with his little brother for two years. During football season, Joey, age 12, comes to every home football game to root for his big brother. "First he'll watch the game from the sidelines," said Hettrich, "and then after the game he'll come into the locker room. As I take my pads off he'll put them on and we'll talk about the game," he said. Hettrich initially shared Joey with another big brother; the older volunteer graduated and now Hettrich has full responsibility. "The best part is that I get to be a kid again," he said, "and I get to know Joey while I'm doing it."

Enthusiasm over VFY is well demonstrated by the children, said Whiting. "The other day two southeast Asian girls were drawing pictures of their big sisters," said Whiting. "They were drawing them like queens, covered in diamonds and wearing crowns."

The benefits of VFY go beyond the children and the volunteers, said Whiting; they also reach the parents. "A big brother or sister can relieve tension within the family by creating a support system for the parents," she said. Dinah Maguire's daughter has been a little sister in VFY for four years. "At first I was a little skeptical," said Maguire, "but I decided to let her go and now I love the program."

VFY Director Tony Greer '90 was struck by the level of parental appreciation. "Every time I call my little brother his mother thanks me over and over," said Greer. "It was heartwarming how she couldn't thank me enough," he said.

Although the volunteers are discouraged from becoming disciplinary figures, said Han, it is important to guide the children away from detrimental behavior. "We try to show them that they acted wrong because they didn't know it was wrong," said Greer. "This way you can teach them the right way rather than just yelling."

This type of "guiding friendship" appears very effective, said Whiting. "These kids look up to their big brother or sister as a role model," said Whiting. "When this role model expresses concern the child will often stop behavior that might be detrimental," she said.

Perhaps by guiding many of our local youths, VFY is making some dent in the losses of the 1980s. "Who knows if VFY will change anyone's life," said Han, "but it's when you see the incredible smile on a kid's face when he's scooped up by a huge football player that you realize it's making their day, and that's enough for now."

"The benefits of VFY go beyond the children and the volunteers."

The organization's core. A glimpse of the directors during a weekly meeting.
History in the

by Jennie Tenser '91

IMAGINE HOLDING A PIECE OF LACE in your hand. The lace is delicate, though, so be careful. Notice the detail—this lace is filled with intricate patterns and designs. It’s beautiful, isn’t it? But where did it come from? Was it bought from a store and mass produced by machine? No, it looks too old to have been machine made.

Maybe it was handmade by the late Elizabeth C. Kackenmeister '25, an alumna who left her fine collection of bobbins and books on lace and lacemaking to Cornell in 1987.

Kackenmeister graduated from Cornell in 1925 with a degree in chemistry and as an alumna, she served on the Cornell Council. Her 143-volume collection, augmented by Cornell's existing collection in the Albert R. Mann Library qualifies Cornell as having one of the finest collections of books on lace and lacemaking in the world. Her donation includes rare and foreign books covering history, techniques, identification and many other aspects of the lacemaking craft. The bequest also includes 124 bobbins, many of which were from 19th century East Midland and Europe. These bobbins are made of bone, wood, glass and brass, and beautifully decorated with beads, inlaid wood and personal inscriptions to Kackenmeister.

This collection was celebrated in 1988 in a ten week exhibit in Mann Library that generated enormous interest and enthusiasm in the craft of lacemaking. The exhibit was put together by a dedicated committee of the Finger Lakes Lace Guild, and later displayed in the lobby of Day Hall, also at Cornell University. Chaired by Eva B. Hoffman, members of the exhibit committee included Shirley K. Egan '70, Eniko Farkas, Jean W. Jagendorf and Holly Van Seiver.

Lacemaking first began in the 16th century in Europe. Fashion's appetite for rich and expensive embellishments quickly encouraged the craft, and it rapidly became important in commerce. Soon lacemakers and dealers that had initially concentrated in Italy, France and England were now traveling all throughout Europe to sell their beautiful laces and spread the latest fashions. By the 18th century, lacemaking was a popular craft for skilled laborers and a prosperous industry.

This was threatened, however, in 1809, with the English invention of the first lacemaking machine by John Heathcoat. It seemed that the craft of handmade lace would soon disappear as a direct result.

Fortunately, though, after almost four hundred years of orally passing on the traditions and techniques of lacemaking, the notion of printing books on lace was popularized in the late 19th century. Written accounts of lacemaking techniques were necessary with the shift from lacemaking as a commercial industry to that of a hobby.

Many of such books can be found in Elizabeth C. Kackenmeister's collection here at Cornell.

According to Egan, Associate University Counsel at Cornell, Kackenmeister first developed an interest in handmade lace following a trip to Denmark where her aunt offered to teach her how to make bobbin lace. She was too young to appreciate it and declined the offer, but a few years later Kackenmeister found a book on lacemaking, Pillow Lace, that inspired her to create her own notebook of directions, patterns, examples of lace. She soon found herself starting her own collection of books that she acquired in her travels, received as gifts, or purchased through
antiquarian book dealers. One of her book dealers described her collection as “what I consider to be one of the most beautiful and extraordinary collections of lace books I’ve seen.”

Kackenmeister continued to pursue her interest in lacemaking. She taught herself needle and bobbin lacemaking, as well as quilting and weaving. Once she mastered these skills, she shared her knowledge with anyone and everyone that was interested. She taught bobbin lace and weaving for almost half of her life and also traveled extensively to lace and weaving guilds, historical societies, museums, craft fairs, where she led workshops and displayed her fine work.

Today, handmade lace is still an appreciated craft. Elizabeth Kackenmeister was a member of the International Old Lace Societies, whose objectives were aimed at keeping the craft of lacemaking alive. In the same spirit, Lace Day, sponsored for its ninth year by the Finger Lakes Lace Guild, was held in Ithaca on October 7, 1989.

Lace Day is dedicated to various kinds of lace demonstrations, lace exhibits, fashion shows, do-it-yourself opportunities, workshops, speakers and vendors’ tables, according to Eniko Farkas, the guild’s past president and a conservation technician in Mann Library.

In 1988, the Guild was so interested in the recently acquired collection at Mann Library that they collaborated with the library to publicize and celebrate the Kackenmeister gift with a series of events. Friends and relatives of Kackenmeister, as well as lace admirers from all over the northeast, traveled to Ithaca to celebrate Lace Day and attend various activities that were held in conjunction with Lace Day.

An opening reception for the exhibit included a fashion show featuring lace in apparel, a string ensemble, refreshments as well as some brief speechmaking. A special seminar was sponsored by the library, the Guild and the Department of Textiles and Apparel. Pat Earnshaw, author and lecturer on lace and lace books, flew in from England to give the seminar.

The Finger Lakes Lace Guild works hard to maintain the strength of the lacemaking craft. Farkas, also a lacemaker, believes that their efforts have been successful in increasing awareness and interest among members of the community.

Mann Library has established a book endowment fund to support the collection of lace books at Cornell. Duplicate books as well as the bobbins from Kackenmeister’s collection have recently been sold and the proceeds from these sales will go directly towards this endowment fund. It is hoped that private gifts will be received to achieve the endowment fund minimum of $5,000.

According to Sam Demas, head of Collection Development, this endowment fund will serve to preserve the books as well as to add to the collection that has made Cornell one of the largest holders of lace books in the world.

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Lace Making
'I've always wanted to be a vet...

"BEING ADMITTED TO THE PRO-
fession of veterinary medicine, I
solemnly swear to use my scientific
knowledge and skills for the benefit of
society through the protection of ani-
mal health, the relief of animal suffer-
ing, the conservation of livestock
resources, the promotion of public
health and the advancement of medical
knowledge.

"I will practice my profession con-
scientiously, with dignity and in keep-
ing with the principles of veterinary
medical ethics.

"I accept as a lifelong obligation the
continual improvement of my profes-
sons knowledge and competence"—
The Veterinarian's Oath

Each year thousands of students ap-
ply to colleges of veterinary medicine,
hoping to some day pledge their alle-
giance to the veterinarian's oath. With
only 27 veterinary colleges in the Uni-
ited States, and four in neighboring
Canada, applicants must be keen and
confident to succeed.

"We see about 450 applications every
year," said Marcia Sawyer, the director
of Student Affairs and Admissions at the
New York State College of Veterinary
Medicine at Cornell University. "And,
only 80 students are admitted into our
first year class." Larger universities en-
roll 100 to 140 first year students, and
smaller colleges range from 50 to 90.

Dave Santisi '89, a first year veteri-
nary student at Cornell, equates the
application process to a coin toss. "You
can have good credentials, but you can
never tell," said Santisi. As with every-
thing, "there are a few who deserve to
get in and don't."

Like most veterinary colleges, Cor-
nell divides its enrollment into three
categories: in-state, out-of-state and
contract-state. States like California
and New Jersey, which do not have
veterinary colleges, contract with those
that do to reserve space for their resi-
dents. Cornell has eight contract states,
including Puerto Rico. According to
Sawyer, "There are 60 spaces for in-
state students, 15 spaces for contract-
state students and five spaces for the
rest of the world."

Jane Shaw '90, a New Jersey resident,
is applying to four veterinary colleges
as a contract student. She started build-
ing her credentials as soon as she en-
tered Cornell, realizing the odds she
faced. "All the way through college I've
planned to go to vet school, but I'm still
thinking of alternatives," said Shaw.
"What happens if you don't get in... do you die?"

 Alternatives to attending veterinary
college are essential, and encouraged.
Santisi remembers his undergraduate
professors saying "keep your options
open." "They have to say that," he
recalled. "Everybody wants to be a vet,
then they take courses like organic
chemistry and microbiology." For some
students the novelty of veterinary col-
lege wears off as they work through the
more difficult courses; for some vete-
rinary college is their goal.

The most obvious option for those
who are denied admission, but who are
adamant about becoming a veterinari-
ian, is reapplying. Marcia Sawyer offers
unsuccessful applicants a chance to dis-
cuss their applications with her. "Stu-
dents generally don't want to hear
about alternatives," she said, "although
they are sometimes receptive to re-
search, usually reproduction." Students
must remember that graduate school is
a possibility.

Isabella Urbina '87, an animal science
major, said Cornell greatly encourages
alternatives to veterinary college be-
cause "the animal science professors
are so excited about their research. A
masters degree leaves you the option of
going into the [animal] industry," Urbina
explained. "I would be thrilled to do
consulting, but there are also areas like
feeds and pharmaceuticals to look into."

Careers in other health fields are also
possible options. Jane Shaw pointed
out that "to be pre-vet doesn't mean
you have to be an animal science major.
You just have to fulfill the require-
ments."

Veterinary college requirements
usually comprise: chemistry, physics,
microbiology, biochemistry and gener-
al, liberal arts classes. A few colleges re-
quire genetics and animal husbandry
courses. Students applying to Cornell
need a minimum of three years of un-
dergraduate study.

One thing that sets veterinary col-
leges apart from other graduate schools
is the type of work experience re-
quired. "Twenty percent of our applica-
tion is based solely on animal ex-
perience," said Sawyer. "Whether it's
working with vets, or working on a
dairy farm, the students must be famil-
lar with animals when they get here."
Most students work on a farm, or in a
veterinary clinic for a summer, prepar-
ing for their highly specialized, future
training.

Now that summer jobs have ended,
Marcia Sawyer's duty of pre-screening
over 450 applications is just beginning.
She believes "it is a good time to be an
applicant," attributing the increased
chances of acceptance to "a steady de-
cline in applications over the last ten
years" for all of the health professions.

Dave Santisi made it through the
process successfully, but for Jane Shaw
the tension is increasing. Next March
her anxious eyes will peer into her
mailbox, searching for the magic enve-
lope containing the admission commit-
te's reply. "All I can do now is apply,
and give it my best shot."
BST for Milk and Money

DALE E. BAUMAN, PROFESSOR OF nutritional biochemistry, said that there’s never been a product like BST. “Its impact will potentially exceed that of such biotechnical advances as artificial insemination and hybrid seeds.” This wonder, bovine somatotropin, now sits serenely on the threshold of FDA approval.

BST is a naturally-occurring protein that is released by cows’ pituitary glands. Researchers in biotechnology have used genetic engineering techniques to produce it in large quantities. The hormone is injected into the muscle and finds its way into the animal’s bloodstream. “The average response over a full lactation cycle,” said Robert Kalter, professor of resource economics, “could approach a 25 percent increase in milk output from a well-managed herd.”

But BST is more than a hormone for milk production. BST works by directing nutrients in a more efficient way—i.e., towards either the production of milk in lactating cows or the synthesis of lean meat in young, growing animals.

BST has a potentially phenomenal adoption rate because it is expected to move with relative ease through the battlelines of consumer concern and farmer innovation. “Advances like hybrid seeds,” Bauman said, “came along after World War II and took about 20 years to reach 90 percent adoption.”

Things look brighter for BST. Bauman said that the advanced state of today’s media systems will mean a more rapid and efficient diffusion of information concerning BST.

An important question for consumers is whether the milk from BST-treated cows is safe for human consumption. Based on studies conducted thus far at Cornell and other universities, it is perfectly safe for consumers to drink, and its nutritional quality, as well as its flavor, remains unchanged. Bauman said that BST is digested just like any other protein.

“Most people,” Kalter said, “are educated enough to see that BST is good and that the economic benefits would be strong.”

Farmers are expected to adopt BST universally as well. “The adoption of BST,” Bauman said, “will require no initial investment and farmers can see immediate results. Increased milk yield is apparent only three days after injection of the hormone.”

Perhaps the biggest controversy surrounding BST is its potential economic impact on our nation’s farm structure. People are concerned that the commercial availability of BST will help large farm operations and hurt the family-run farms.

“The idea that BST would put 30 percent of small family farms out of business,” Bauman said, “is a gross exaggeration.” According to Bauman, the number of cows and farms is going to change in the next five to ten years despite BST. The availability of the hormone, he said, will only modestly amplify what is already taking place in the dairy industry.

Bauman said that one cannot say unequivocally what percentage of farms will be put out of business. “It depends on a lot of factors,” Bauman said. “As it is, farmers have to increase their efficiency just to maintain their present status. And BST can do this for them.”

Kalter agrees that BST will indeed reinforce current trends in the dairy industry. Kalter departs from Bauman, however, in his belief that BST will be a great accelerator of this trend. He said that as production increases in response to somatotropin, milk prices will fall.

“The key [to competition],” Bauman said, “is knowing how to get the best out of one’s herd. If a farmer is a poor manager, he or she will get zero response to BST no matter how solvent he or she may be.” Kalter agrees, but qualifies that it is oftentimes the smaller farms that are less well-managed. Both Bauman and Kalter, however, agree that this needn’t be the case.

Kalter summarized it as a long-versus short-term issue. The disadvantage of financially-stressed farms may not be readily apparent, but in years to come we may see a large farm dominance and consequent smaller farm extinction.

If BST technology is to flourish, Kalter said, it will eventually necessitate advanced equipment. This will require substantial investment and will give the financially more secure farmer the upper hand. As a result, the saving graces of good management may no longer be enough.

Bauman and Kalter also pointed out that farmer success may be heavily dependent on government control. The government can counteract BST’s long-term tendency to put smaller farms out of business by instituting price support programs.

But there is no denying that BST’s commercial production may result in some economic dislocation of farms. “Every technology has its pros and cons,” Kalter said. While BST may potentially put some disadvantaged farms out of the running, its benefits, lower food and milk prices, could have an enormous impact. “BST,” Kalter said, “will increase society’s aggregate standard of living in the long run.”

Kalter said that BST will also create a dairy industry that’s both more competitive with other products and more able to maintain its market share. Finally, he said, BST provides an opportunity for good farm managers to increase their profits and achieve an overall higher standard of living.

To Bauman, getting FDA approval of BST is not of the utmost importance. The knowledge gained from BST research and other technological advances will be more important in the long run. We will find more ways to increase this knowledge and improve the efficiency of animal production. BST is just one link in an extraordinary chain of innovation and understanding.

by Michele Pepe ’91
AGRICULTURE
ON THE ROAD

WOULDN'T IT BE GREAT IF CORNELL OFFERED an all expense paid trip to the western United States which earned you two ag college credits and helped expand your knowledge in the field of agriculture?

Well, Cornell does in fact offer such a trip. A "study trip" course, the brainchild of agricultural economics Professor Wayne Knoblauch, offers a five-day excursion to a designated area of the United States. The three-year-old study trip course, offered through Special Topics, awards students two independent study credits upon successful completion of the course. Successful completion includes participating in all scheduled trip events and submitting a written report on some aspect of the visit. Usually the trip is scheduled during fall recess in October.

Last year's excursion took ten students, one teaching assistant and Professor Knoblauch to the Rio Grande Valley in Texas. They explored the many facets of agriculture, compared the diversity of Texas agriculture with New York's, examined the profitability and financial characteristics of the region and evaluated the management strategies used in the businesses they visited. The trip related directly to material covered in Farm Business Management, but provided students with a more in-depth coverage of specific ag-related concepts.

Knoblauch chose the Rio Grande Valley because of its agricultural intensity and diversity. "The Rio Grande Valley is an area that produces great quantities of cotton, sugar cane, citrus fruits, sorghum and vegetables," explained Knoblauch, who coordinates the study trip program and chooses the destination each year.

"The idea is to provide students with a different perspective of what agriculture is like in other areas of the United States," said Knoblauch. "A lot of students are at a crossroads as to what they want to do following graduation and this trip can offer them valuable insight into additional opportunities."

During their five days in Texas, the students visited cattle ranches, vegetable and fruit packing houses, orchards, sugar cane plantations, irrigation facilities and a wildlife refuge. Tours were offered at each facility and students were given many opportunities to have their questions answered on a one-to-one basis. Additional meetings with Cooperative Extension agents, agribusiness managers and agricultural lenders were also arranged during the visit.

Jane Emerich '90, an agricultural economics major interested in agribusiness, visited Texas last October. The study trip made a lasting impression on her. "I didn't know anything about the Rio Grande Valley until I visited the area," said Emerich. "I discovered a lot of job opportunities within the region because it's such an expanding area of agriculture. And, meeting all those people really opened a lot of doors for me."

Emerich found the sugar cane farms of most interest, but was also impressed with the large diversity between Texas and New York agriculture. She was amazed by the crop production differences in Texas where a farmer will grow 25,000 acres of a crop compared to the typical New York state farmer who grows only 250 acres.

"The big thing I realized was even though the types of agriculture were different between the two areas of the country, the people are still the same," she explained. "They [Texas farmers] are still farmers even though the number of acres they plant is so much more."

Other students who completed the trip had many of the same thoughts and recollections. Becky Brown '90, a business management and marketing major whose interests lie in marketing and accounting, remembers the trip as worthwhile, learning intensive and helpful to her future plans.

"The trip broadened my horizons," explained Brown. "Before I left for Texas I was very interested in dairy farming as a career, but now I am aware that there are more than just dairy farms in the world of agriculture."

For Brown, the biggest learning experience was the discovery of the Texan attitude toward Cornell and its stu-
dent body. "I learned a lot through being a representative of Cornell in a portion of the country that looks upon us with much respect," explained Brown. "Cornell is a big name down there [Rio Grande Valley] and Texans see us as 'the smartest kids in the East.' If I whacked out my Cornell degree in that area of the country, I could get a job in a second, working in almost any field of agriculture that I chose."

This year, the study trip will take ten different students to California's San Joaquin Valley where yet another region of agricultural diversity will be explored. Tours of wineries, dairies, fruit processing plants and citrus groves will offer students greater opportunities not possible through classroom learning.

Doug Blumer '90, an animal science major with an interest in dairy farm management, feels the trip will give him greater knowledge of farm management practices, and will some day help him successfully manage his father's dairy farm.

"The California trip will provide me with a lot of contacts among ag consultants and farm managers," explained Blumer. "I'll get to see the different ways that California farmers make their farms work and hopefully I can learn from their mistakes or successes. This will help me build ideas and possibly make me a better farm manager."

Selection of study trip participants is based on many factors, but most importantly, students must possess an interest and demonstrate an ability in farm business management. Knoblauch, who is head of the selection committee, added that academic performance in Farm Business Management plays an important role in the selection process.

Students need not be ag economics majors, nor hail from a farm to be selected for the trip, but must somehow be connected with the field of farm management and interested in pursuing some aspect of agriculture.

"I like a lot of diversity in students' backgrounds," said Knoblauch, who selects participants with a wide range of agricultural interests. Last year's group represented such majors as animal science, farm management and finance, general agriculture and business management and marketing.

These expense paid study trips which have taken students to Washington's Columbia River Basin, the Rio Grande Valley and to California's San Joaquin Valley this October, are financed and made possible through the Stanley W. Warren Teaching Endowment Fund.

This income-generating fund was created in 1986 as a tribute to Professor Stanley Warren's 40 years of teaching excellence in the areas of ag economics and farm management. Stan Warren '27 taught in the Department of Agricultural Economics from 1933 through 1972.

By financing these study trips, the Stanley Warren Teaching Endowment Fund is keeping within the tradition of learning off campus, a philosophy that Warren believed in. He is best remembered for the field trips he organized as a supplement to classroom material. Although Warren was a strong proponent of classroom education, he recognized the need for out-of-class learning.

"The classroom is where you learn the principles, but to understand those principles, you must see them in operation," explained Warren. "Part of learning business management is studying theories in class, but also seeing how the theories apply."

Warren provided his students with this necessary outside education during his teaching career and feels the fund which bears his name will preserve the tradition he established.

The existence of programs such as Knoblauch's study trips and funds like the Stanley Warren Teaching Endowment Fund offer students unique opportunities that might not ever be offered again. Students should seize learning opportunities while they can, especially if the opportunities offer them the experience of hands-on education. It is through this hands-on education that knowledge is applied. Like my great-grandfather used to say, "Learning is by doing and by doing you learn."
AFTER A LONG DAY AT THE OFFICE you sluggishly get into your car and head for home. As you pull into the driveway, you realize you forgot to stop at the supermarket for some fresh vegetables. Somewhat annoyed, you take out a can of vegetables from the cabinet. As you open the can your mouth begins to water. You are tempted by the carrots' bright orange color and fullness. You pop one into your mouth. To your surprise and satisfaction, the carrot is crunchy, not soggy like most canned vegetables.

Thanks to the accomplishments of a fine Cornell chemist, you will soon be able to buy canned vegetables that taste better than ever before. Cornell University chemist Malcolm C. Bourne has invented a new food-preserving process that makes canned vegetables nearly as firm and crisp as fresh vegetables. Bourne is a professor of food science and technology at Cornell's New York State Agricultural Experiment Station in Geneva, New York.

The Australian-born chemist enthusiastically talked about his new invention resulting from his years of work at Cornell. Bourne has been a member of the Department of Food Science since 1962 and is best known for his studies on the textures of various foods. "I've always been interested in studying anything to do with texture; for example, how do you measure texture, and what makes up the texture in food?" he said.

Bourne's particular interest in food texture led him to investigate the reasons for the mushiness of cooked vegetables. "About two years ago I came to the conclusion that I could develop a texture in vegetables that remains firm when heated," Bourne said.

After completing various experiments, Bourne suspected that the vegetables were losing their firmness during the first stage of the cooking process when they were exposed to intense heat. He realized that the heat of cooking breaks down the large, complex pectin molecules that are responsible for firmness in fresh vegetables.

Vegetable canning, as currently practiced by commercial food processors, follows the same general procedure that was invented in the early 1800s. The basic process involves two cooking steps: a short period of blanching (heating) the vegetables to drive out gases so that more vegetables can be packed in a can, and a longer period of heating in the closed can to sterilize the vegetables and kill microorganisms that would cause botulism or other forms of spoilage.

Bourne experimented with the first stage of this heating process to find the ideal conditions for firmer-textured canned vegetables. The pilot food-processing plant in Geneva prepared

Dr. Malcolm Bourne cans a batch of fresh tomatoes at the pilot food-processing plant in Geneva, NY.
thousands of cans of carrots, beans and other vegetables at various temperatures and holding times.

"The key to this process is the treatment the vegetables receive before they are canned," Bourne said. "The holding time allows the vegetable's natural enzyme to take effect and increases its firmness." This enzyme, called pectin methylesterase (PME) was discovered by one of Bourne's colleagues, Professor J.P. Van Buren in the early 1960s.

A holding time of 30 minutes before sterilization was sufficient to allow firmness to set in. Commercial canners also could afford this length of time in the production line.

A blanching temperature of 140 to 150 degrees Fahrenheit was found to be best for the desired enzymatic action. The results of the final product were dramatic. Carrots prepared at lower temperatures were nearly twice as firm as those prepared from conventional canning methods. You could easily compare them to fresh carrots that are lightly cooked in your kitchen.

In addition to the lower-than-normal cooking temperatures and the brief holding time to allow the food enzyme to "fix" the vegetable's crispness, two other modifications were made that produced an even crisper vegetable.

Adding citric acid and calcium in the final stage of the process produced extra crispness. The addition of citric acid permits a more gentle heat treatment during sterilization and results in a firmer-textured product. Bourne said, "Small amounts of calcium improve the texture and also improve the nutritional value to a degree."

You may be wondering what happens to the vegetables' firmness when you reheat them at home. "The vegetables have what I call thermal firmness," Bourne said. "They can be boiled up to three hours and still retain most of their original firmness. Their texture is resistant to degradation by heat."

What does this new food-preserving process mean for consumers? For one, consumers will soon have a choice between soft or crunchy canned vegetables. "I believe that many consumers prefer a firmer texture in vegetables. Canned vegetables also provide a convenience factor. People can come home from work, open a can and have crisp vegetables. They are great to use in salads or stir-fries and now people loving microorganisms thrive in temperatures around 150 degrees Fahrenheit and many reproduce in tanks used in commercial food processing plants. Bourne is confident that with the help of microbiologists the problem can be overcome within the next two years.

A second problem remains to be solved. Bourne explained that they are able to produce vegetables with varying degrees of texture; firm, extremely firm and crisp. So just how crunchy do consumers like their vegetables? The question remains for the food marketer and the developer to decide.

Although work needs to be done before the product reaches the supermarket, it is important to note the vast improvement made in canned vegetables. With the fresh taste and crunchy texture these canned vegetables are sure to be successful. Bourne said, "An increased staff is now working with the development of the product to get it on the market."

Cornell has applied for a patent on the canning process to be used commercially. H. Walter Haeussler, Director of Patents and Technology Marketing at Cornell University, said, "I have every reason to believe that a patent will be issued by next year on the canning technology." Haeussler pointed out that a patent on an invention does not necessarily guarantee success. "The market place will determine if we [Cornell] make any money on the invention," Haeussler said. If nobody buys the product, we won't make a penny. If the food scientist is correct, though, the demand for firmer, crisper vegetables is strong.

According to Bourne, the new food-canning process "has opened the door of opportunity for texture." Until now, crisp vegetables have either been fresh or stir fried, now you can get fresh-tasting vegetables from a can. Bourne made the point best when he said, "Now you can get crunch instead of squish."
Immersed in ISRAEL

TO BECOME IMMERSED IN A FOREIGN culture, while pursuing a course of study directly related to our own interests, is an experience many of us will never have.

Sylvia Beth Stone '90, however, had just such an opportunity when she spent a year in Israel through the Cornell Abroad Program. She studied in the Overseas Student Program at Ben Gurion University in Beer Sheva from July 1988 to July 1989. After looking at a number of different programs, she chose to go to Israel because Ben Gurion had an excellent ecology program. She also wanted the opportunity to learn more about her Jewish heritage.

When she first arrived in Israel, Stone took a six week crash course in Hebrew. "It was a very intense course, going about six hours a day," she said. Although the classes she attended were taught in English, some proficiency in Hebrew was desirable for the program's ten students.

Stone's course work consisted of 15 credit hours each semester in various areas, including geology, ecology and computer science. She was also able to take classes such as Arab-Israeli Relations, Desert Development and Art of the Desert. All of the credits Stone earned while in Israel will count towards the completion of her major in the College of Agriculture and Life Sciences—natural resources, with a concentration in wildlife.

In addition to her regular course work at Ben Gurion, Stone worked with a team of researchers from the Desert Ecology Center of the Negev Desert. The team was studying the morphology and eating behavior of Nubian ibex, mountain goats native to the desert. As part of her research, Stone observed the ibex in one of the desert canyons where they typically live.

The objective of the study was to determine if tourists exploring the canyons were having a negative effect on the ibex. The study is still not complete, but the research does indicate that the tourists have a slight negative

Sylvia Beth Stone '90 captured the brilliance of the goats' home in this sketch of the Avdat Canyon.
effect on the ibex, although it is not enough to force the ibex out of the canyon.

Stone explained the research project in a scientific paper which she hopes to have published. The fieldwork she completed and the experience she gained by working on the project have become a definite asset, Stone said. “It puts you way out in front of others, in terms of career possibilities, to have worked on such a project,” she said.

In addition to the opportunity for relevant field experience, Stone also had the chance to live as a foreigner in another country. She discovered that, although Israel is a very modern country, many aspects of its culture can be jarring to the uninitiated: like the times she went jogging and was chased by bands of small boys, or was laughed at by groups of teenaged girls. Jogging and other forms of exercise are uncommon pastimes in Israel, Stone discovered, especially for women.

Living in Israel gave Stone the chance to discover more about her Jewish heritage. As the year progressed, she found herself more and more immersed in the Jewish way of life, and enjoying it. She found that in Israel, Judaism is usually an integral part of life, more than just ceremony, as it often is in the United States.

In the Beer Sheva area where Stone lived, she noticed many religiously observant people following the Jewish tenet that it is not permissible to ride in a vehicle on Shabbat, the Jewish Sabbath. While this tenet is followed by some individuals in the United States, many more individuals follow this tenet in Israel than here in the United States, Stone found in her experiences in the Beer Sheva area.

As she looked back on her year abroad, Stone stressed that it was her life outside of academics that really got her excited about Israel. “I learned so much about the world while I was there,” she said.

This feeling about the value of a study experience abroad extending way beyond academia is one typically expressed, said Arthur S. Lieberman BS ’52 MS ’58, professor emeritus and resident director of the Cornell Abroad Program in Israel. “As important as academics are, the overall contact with society, and the ability to become culturally immersed, takes on real significance,” he said.

Lieberman works closely with students such as Stone before, during and after their trips abroad to Israel. “The tremendous diversity and contrasts that one encounters in Israel are responsible for generating great excitement among students,” he said. Some students, like Stone, find the experience of studying in a country where they can go back to their ethnic roots especially fulfilling.

“The really wonderful thing about study programs in Israel is that they are open to students from every country, of any race or religious affiliation,” Lieberman said.

The experience of becoming immersed in the Jewish culture of Israel, studying at a foreign university and working on a major research project all add up to what Stone said was a “magical year.”

by Cyndie Shearing '90
**CONSTRUCTING**

by Sara J. Frank '90

Their statues pose silently, seeming to guard the arts quad. For many years the founders, Ezra Cornell and Andrew Dickson White, have witnessed the development of the arts quadrangle from its meager beginnings as Morrill, McGraw and White halls to what it is today.

Suppose, however, the statues, with the adroit minds and animated souls of these founders came alive and unhinged themselves from their posts to take a walk around campus. They stare too much at one place; change is good.

On their way around, they meet up with Liberty Hyde Bailey, director of the College of Agriculture in 1903 and the driving force in expanding the College from a small, disrespected department to a major component of the University. Walking, talking and reminiscing, they turn up Tower Road.

Gazing ahead, the founders look bewildered and ask Bailey what that very mysterious and large structure is on upper campus. It was not there on their walk up this way three years ago. They become more confused when they notice Stone Hall has disappeared.

Amused by their wonder, Bailey explains proudly that this new building is Academic I. He tells them the structure was designed and built to meet the needs of a growing academic community. "We took that barn down a long time ago," Bailey said. "This is the '80s."

The 100,000 net square foot building is imposing and the founders comment on its box-like structure, but they are intrigued.

A comprehensive plan, proposed by the State University of New York, began in the early '80s for the replacement of five antiquated buildings—Stone, Roberts, East Roberts, Caldwell and old Comstock halls—by two new buildings, Academic I and Academic II (new Comstock Hall). These two new buildings were to equal the five old ones space for space.

At one point, the plan called for the erection of both buildings on the ag quad, one at the north end and the other on the site of Roberts, East Roberts and Stone halls. Objections were voiced against a building on the end of the quad.

Plans for the Academic I building were initially drafted for a ten story tower on the west end of the ag quad. The proposed building, likened to a phallic symbol, was rejected by Cornell's Board of Trustees because of its interference with the ag quad's cornice line and further development was scrapped.

Gwathmey-Siegel, architects from New York City, were next commissioned to design a building that could be approved.

Opposition to the location of the new building came from faculty, students, staff and Historic Ithaca, who took the College to court in order to save Roberts, East Roberts and Stone halls. The buildings which would have been saved if the tower had been built would definitely have to be leveled for execution of the new plan.

The historic preservationists tried to save these buildings by having them declared part of a national historic site. Demolition of Stone Hall had already begun when Historic Ithaca served the College with an injunction to stop construction and to maintain and restore the buildings. Progress was frustratingly halted in the fall of 1986 and activity resumed in the spring of 1987. In the interim, area pigeons had a new place to roost.

Experts' testimonies convinced the courts without a doubt that renovation would be futile and too costly for its purpose.

Construction resumed with Streeter and Associates from Elmira working feverishly on the building to meet the building's scheduled completion and full operation date set for January 1990.

"It's been a long drawn out process," said David Call '54 MS '58 PhD '60, Dean of the College of Agriculture and Life Sciences, with a sigh that had thank goodness written all over it.

The four story building, divided into north and south wings, is the new home of the departments of communication and education, the program in landscape architecture and the College's administrative offices.

Its design physically separates the wings by a large underpass—not intentionally conducive to skateboarding—which serves as entry points into the building and a walkway to Bailey Circle. The Circle will eventually be renovated into a "people friendly" plaza decorated with shrubbery, benches and walkways.

In attempts to be aesthetically pleasing on the outside, the building was constructed of brick, similar to the traditional building material for most of Cornell's architecture, to match that of Plant Science and Warren Hall on the ag quad. Its design also blends with that of the more modern Johnson Graduate School of Management and the Space Sciences Building across the street. Its location is also meant to give the ag school a real quadrangle by completing a fourth side. Eventually ivy will sprawl across Academic I to help it fit more into the tradition of Cornell.

Looking at the building outside from the ag quad side, to your right is the north wing and to your left is the south. The first three floors of the north wing house the College's administrative offices. The second and third floors of the south wing are where the two academic departments will be located. The fourth floor of the north wing and the bridge between the buildings contains all landscape architecture offices and studios. The building has a dome on the north side, nicknamed the silo, the hay barn and the penthouse. "I call it the landscape architecture design studios," said Kenneth Wing '58 MS '60 PhD '66, Associate Dean of the College.
THE FUTURE

The compact inside is handsomely decorated in inviting hues of pink and grey with comfortable lounge furniture scattered on the floors for staff, faculty and students to sit and talk in. Offices are small and standardized, and the hallways are narrow but, "the paint sticks to the walls," said Velvet Saunders, office assistant for the Office of Administration Services. "We love it over here."

Three main features highlight the new building: an auditorium, cafeteria and the landscape architecture studios. The 602 seat auditorium was furnished through the generosity of the alumni of the College. The state provided only the shell. Furnishings cost approximately $500,000.

Intended for classroom functioning, the auditorium is extremely modern and equipped with computer-enhanced audio-visual equipment and a satellite hookup. It's even air conditioned.

The new auditorium was built with the expectation that it will be the "finest teaching facility on campus," Call said. "Students will love it." The dedication of "Alumni Auditorium" was held on October 7, 1989.

The 400 seat dining hall is owned and financed separately by Cornell Dining. It will provide full service breakfast and lunch, cash or co-op dining, and is intended to alleviate some of the prime time lunch rushes at other facilities.

The landscape architecture studios are spectacular, Call said. "You have to see them to believe them."

Reactions to the structure are mixed. "We won't be able to tell if we like it before we move in," said Richard Ripple, Chair of the Department of Education. "There's always trauma associated with change." Administration Services are already moved in and the departments are expected to move mid-December, early January.

Roberts and East Roberts will be taken down and the area landscaped. "There's a number of people in our department who feel just a bit sad about parting—as anyone would feel about a home they have lived in for 15-20 years," said Royal Colle PhD '67, Chair of the Department of Communication.

Plans for extending the beautifully manicured Minns flower garden in front of the College to the dining facility are in the making. The mass of blooms with benches placed throughout will serve as a respite and will help break up the succession of buildings Tower Road is fast becoming. "When everything is done and landscaped I think people will like it (Academic 1)," Call said.

Plans for a new plant science teaching and research facility are in the making with construction to take place within the next decade. "It's part of the evolution of the College and University to meet the changing needs of society," Wing said.

Mann Library, Warren Hall and Plant Science are targeted for major interior renovations or expansions within the next few years.

Those resisting the change and hesitant to accept the new building are encouraged by the College to take a new look at the building and to give it a chance. "I didn't like it when I first saw it, but once I got over here I really liked it," Saunders said.

The modern facility represents change and transition, with facilities and decoration "appropriate for the number one ag school in the country," Wing said.

If you still don't like it, try to remember that "buildings are for function not for form," Wing said. "The strength of a college is in its people and programs, not in its buildings."

Amazed at it all, the founders walked back to their posts. They were delighted to see that their initiation of a University for the fulfillment of a revolution in higher education, with appropriate campus development, was continuing still. Bailey laughed when they agreed that they liked this building better than that white concrete thing they saw on their walk to Collegetown last year. ■
The news of my death is greatly exaggerated. — Mark Twain

So would say the family farm, if it could speak. Speculation and publicity have plagued it until the "plight" of the family farm has become a political issue. Should we try to protect the family farm? Is the family farm in need of protection? Has it ever been? An even more difficult and exasperating question is, what do we mean when we say "family farm"?

Springing to mind are images of Pa on the tractor, the boys tending the animals, Ma in the kitchen and the girls weeding the garden. For scientists working with census data, however, the term "family farm" is more difficult to define. As Bernard Stanton '49, professor of agricultural economics, puts it, "If you started looking for a generally accepted definition of the family farm, you couldn't find one."

Frequently, researchers rely on the numbers generated by the farms—either the income of the farm or the acreage. A very simple definition includes two basic assumptions about the family farm: at least 50 percent of the labor is provided by the family and at least 50 percent of the family's income stems from the farm.

Ironically, media attention to the status of farms has increased in the past ten years, while the real exodus from farming occurred earlier. From 1950 to 1970 there occurred what Stanton refers to as the "quiet revolution"; one-half of the farms in the United States went out of business. These farmers were partially pushed out by the industrialization of agriculture and pulled out by the prospect of better jobs in urban areas.

The decline of the family farm received a good deal of attention in the early 1980s with the "enormous fiasco that swept across the Great Plains," said Gordon Conklin '49 MS '50, editor of the American Agriculturist.

"They [the farmers] borrowed too much money—banks threw away their rule books to lend it to them because they thought they were protected by the increasing land value. When the land market bottomed out, the land was worth half what it was. The farmers' cash flow projections, which wouldn't have allowed them a loan earlier, then caught up with them," Conklin said.

The land market collapse also discouraged corporations from investing in the farming industry. "If you have $5 million to spend and a choice between a one percent return and a 14-15 percent return on your investment, which would you choose?" asked Frederick Buttel, professor of rural sociology.

Since this "fiasco," the economic conditions in agriculture have changed, leading many to speculate as to the future of agriculture, and of family farms in particular. What's going to happen now that outside investors are no longer interested? Buttel said, "I wouldn't be surprised if there were indications of some renaissance [of the family farm]."

Conklin doesn't agree that the family farm was in trouble. He believes that the middle-sized farms—which people so often think of as a family farm—are changing, he said. Since the number of part-time and large-scale farms are growing, the number of middle-sized farms may be declining. But this does not mean that the number of family farms is declining, he said.

Conklin does not like the size limitation usually put on the term family farm. He mentioned the Call farm, a 3,000-acre farm in Batavia, NY, which is
in Transition

run by two families. The average American farm has about 420 acres, so the Call farm is too big to be middle-sized, too big in some minds to be a "family farm." Conklin suggested that perhaps the family farm isn't disappearing, but growing.

Both Stanton and Conklin believe that the family farm will always survive. "Family members will work under conditions and pay that wouldn't be legal for corporations. They'll work longer hours for less pay than they would accept if required from a job. Corporations, too, have a lot more laws to comply with. A family's cost structure is just a whale of a lot less than a corporate farm," Conklin said.

Stanton agrees that there will probably be larger and larger farms. Trying to keep the small family farm alive is like maintaining a living museum. "It sounds wonderful and romantic but it's not practical for the people who are the museum," he said.

Since U.S. census data is somewhat limited, many researchers look to Canada, which has similar trends in agriculture to those in the U.S. Canadian farms are also increasing in average acreage, Buttel said. This is not a sure indication of future farming in the U.S. because the increase is a result of farmers starting out big, not increasing the size of their farms from middle-sized to large.

Buttel, Conklin and Stanton, who all grew up on farms themselves, agree that the condition of the family farm has received entirely too much media attention. "They've muddied the waters catering to the public," Conklin said. The family farm should be treated like any other small business because the family has been able to compete very effectively, Stanton said. According to these three, the plight of the family farm has been greatly exaggerated.

Just beyond the lawn begins the crop that supports the family farm.
COME JOIN US FOR A DREAM VACATION in the heart of the Adirondack wilderness. You will leave civilization behind as we head west into the setting sun, cruising the meandering waters of the Marion River. Intricate bays and coves, islands and pristine camp sites, hills and waterfalls, all are yours to explore.

Does this sound enticing? Read on...

"Welcome to the rolling mountains and secluded hollows of New England. Let yourself loose...d a n c e i n t h e r a i n ... s i n g i n t h e s u n ... d i s c o v e r t h e f o r e s t e d h i l l s o f B e n n i n g t o n C o u n t y , V e r m o n t . U n w i n d , r e f l e c t a n d e n j o y t h e o u t d o o r s . "

The above quotations were not taken from a travel catalogue. They are student-written descriptions taken from the Wilderness Reflections program brochure.

Wilderness Reflections is a student-run organization that sponsors canoeing, backpacking and bicycling trips through the northeastern United States for incoming freshmen. Although the trips begin and end in Ithaca, destinations range from the Finger Lakes area to the Black Forest Trail in Pennsylvania and the Adirondack region to Vermont's Green Mountains.

"It does not matter where you go or what you see, whether you are on the top of a mountain or at the bottom of a valley, it is all in terms of the group making lasting friendships," said Wilderness Reflections guide Eric Dahl '89. Dahl led his tour to the mountains in Bennington County, Vermont.

"It was the greatest thing, the way my group bonded over the trip. It felt like we had known each other for years," said Kristi Holland, '93, whose tour took her along the Raquette River in the Adirondacks. "It was a confidence builder, a boost I needed before I got to Cornell and a chance to relax before orientation."

And relax she did! Holland said her six-day tour was probably the most relaxing week of her life. During better weather they paddled down the twisting Raquette River. She explained how people would prop their backpacks behind them and put their feet up in front of them so they could lounge while they paddled. Time in the canoes was spent getting to know each other. On rainy days the group set up tarps and spent time sleeping and talking.

Other parts of Holland's trip, however, were not so simple. "Once in a while we ran into beaver dams and we would have to pick the canoes up and carry them over. This one day we were going down a river and dragged the canoes over three dams. When we finally got going again, the river stopped at a dead end and we had to go all the way back," said Holland.

Fortunately, Dahl's trip did not have any discouraging events this year. He said his group was particularly jovial and spent a lot of time goofing around. He attributed their festive attitude to the moon; the first night of his tour...
The Wilderness coincided with this summer's full lunar eclipse.

Dahl's group lived up to their zany reputation in the Wilderness Reflection competition to have one's tour picture in the 1990 brochure. They spelled out WR (for Wilderness Reflections) on the ground with their camping gear and then captured an aerial view of the design by taking the picture from the top of a watchtower.

"Both from the student's view and the guide's view, the trip is a fulfilling experience. As a guide I felt I was a part of a continuous program and sharing something special with the students. For me, Wilderness Reflections is an important part of my whole college growing experience. It gave me a jump start and for four years I have kept in touch with at least half of the people on my trip. That is why I became a guide. The Wilderness Reflection trip is a worthwhile thing and it will stop happening if people do not get into it," said Dahl.

There does not seem to be any danger of the program stopping. Wilderness Reflections was forced to turn away students because this summer's trips were full.

Dan Tillemans, the Wilderness Reflections advisor, explained that the primary goal of the organization is to provide new students with a program that gives them the opportunity to build meaningful friendships and to orient themselves to a new situation in a supportive and non-stressful environment.

"The trip was the transition I needed between leaving home and coming to Cornell. It was great to have a circle of friends before I got to orientation. Cornell is such a big place and orientation can be overwhelming. I am so glad I did it," said Holland.

Wilderness Reflections has a mission statement that according to Dahl, sums up the philosophical aspects of the program.

"Wilderness Reflections recognizes that there is a noble strength in every person. We seek to discover this strength through the thoughtful use of the wilderness. There we find a simplicity and a sense of perspective; there we experience the immediate consequences of our actions; there we discover our ability to help ourselves. Challenged by the wilderness, the individual realizes the group's potential and the group recognizes the individual's strength. With the group's support and compassion, we learn to feel comfortable asking for help and to learn to help others." ■

by Teri B. Kestenbaum '91
One Man’s Concern

DYNAMIC, KNOWLEDGEABLE, COMMITTED: these are just a few of the words that friends, students and colleagues use to describe Robert W. Venables, senior lecturer of American Indian studies. Venables instructs the popular ALS 100, which focuses on Native American history and culture.

Venables’ passion for Native American culture began in childhood, when his curiosity was piqued as his sixth grade teacher described the role of the British in the Revolutionary War. “My ancestors are almost entirely British, and I couldn’t believe that at one time they were on the opposing side in the American fight for freedom,” he said.

Determined to find out why, Venables embarked on a quest for knowledge that would influence the course of his life. “I found that Native Americans played a crucial role in American history. In order to understand my past, I had to understand theirs,” he said. In high school, he began a research project that would later be incorporated into his doctoral dissertation.

It was not until 1961, as an undergraduate student of American history at Northwestern University that Venables became involved in Native American civil rights issues. Although he claims he was too old to be a hippie (“I was on an Onondaga reservation during Woodstock,” he said), he became engrossed in the new-found awareness of justice and freedom characteristic of the time.

He almost traveled down a different path in 1964, however, when he auditioned for RCA as a folk singer. “They told me that I had a good voice, but that I couldn’t play banjo to save my life, and suggested that I sing with a well-known group of studio musicians.”

He refused, angry that they did not see his gift. Today, he is content with the way things worked out. “I believed I was good enough, and I’m perfectly happy to know that I tried.” Venables went on to pursue both a Master’s and a PhD in American history from Vanderbilt University in 1969.

After receiving his doctorate, he taught American Indian history at Hunter College and helped found the American Indian Community House in Manhattan, which is celebrating its twentieth anniversary this year. The House brings together those of Native American descent to focus the social and political concerns of Native Americans.

Through the House, Venables became acquainted with two Native Americans who had been awarded grants from the Ford Foundation, which donates money to research and charity. “They used the grant money to travel the country for one year, researching Indian life and collecting damning evidence about the status of the Native American. We wanted to expose this data to the public and to the political forces of the time, hopefully to instigate a change,” he said.

In the spring of 1969, the Ford Foundation, with Hunter College, coordinated a reception to unveil the evidence. Invitations were sent to Look and Senator Edward Kennedy. Unfortunately, the attempt to reveal the depressing truth of Native American life failed.

“No one came—it was a political decision. This stuff was too explosive; a lot of political issues at the time were intertwined with Native American issues,” said Venables. The information had been locked away in Ford Foundation vaults ever since.

“The incident made me realize that even a ‘liberal’ like Kennedy was not going to play the game. Anybody involved in the government was likely to be an enemy,” said Venables. For this reason, Venables encourages his students to think for themselves, and to seek truth.

He believes that hypocrisy and ignorance on the part of non-Indians for Indian rights issues has caused the gradual extermination of the Native American people and their culture: “They will continue to be exterminated if lies continue to be told. As a non-Indian, I feel impelled to do something.”

His brow furrows in anger when describing the injustices that Native Americans have endured. “Every one of 400 treaties with American Indians has been violated. During the Reagan administration, $5.8 billion of oil was stolen from Indians, taken from their reservations without their consent. The American government is amazingly inconsistent: we ‘uphold’ the Bill of Rights, yet we steal from people who have lived on this land and supported their cultures for thousands of years.”

His objectives focus on making non-Indians aware of Native American concerns. “Basically, the issues focus on rights of possession: reservations have within their boundaries major sources of oil, uranium, timber and crucial bodies of water. If Native Americans had the right to freely control their environment, the cost of living would rise for non-Indians.”

Because they cannot freely control their land, Native Americans also have difficulty preserving their religions and cultures. “They don’t want to be subordinate to non-Indians or be absorbed into non-Indian society,” said Venables. “They want the right to preserve their cultures and coexist peacefully with non-Indians.”

As an educator, his goals are twofold: not only does he hope to open students’ eyes to Native American history, art and philosophy, but also to make them aware of the injustices that Native Americans face.

“I want to help students see things in a different way,” he said. “The American Indian Program is here to make students aware that Native Americans are here, that their concerns need our attention. And I want to teach their culture, religions and history as a different way of interpreting the world in which we live, and the events we experience.”

With the help of his unflagging dedication to teaching and to Native American issues, Venables will surely achieve his goals.

by Kristen M. Miller ’91
Vegetable Breeding Symposium

A symposium was held last Spring to mark the inauguration of the newly established Vegetable Breeding Institute, which is made up of plant breeders, geneticists and other scientists from the College, the New York State Agricultural Experiment Station at Geneva and the University's Long Island Horticultural Research Laboratory at Riverhead. The symposium was held at the Ithaca Sheraton Inn. The aim of the Institute is to promote vegetable improvement by fostering cooperative research among plant breeders and other Cornell researchers in associated areas, according to Michael H. Dickson, professor of horticultural sciences at the Geneva station. Topics covered at the symposium ranged from sources of resistance to major viruses affecting vegetables to biological control of the cucumber mosaic virus with genetically engineered plants. David L. Call BS '54 MS '58 PhD '60, dean of the College, and Dickson opened the symposium. A banquet during the symposium honored Henry M. Munger BS '36 PhD '41, professor emeritus of plant breeding and vegetable crops, for his distinguished career as a plant breeder and geneticist during the past 40 years at Cornell.

New Addition to the Plantations

An addition to the Cornell Plantations was officially dedicated July 26, 1989 as Louise and Whitey Mullestein '32 handed over the Hillside Garden on the slope east of the Robison New York State Herb Garden to the care and keeping of the Plantations. Dean David L. Call of the College accepted the donation on behalf of the University. The Mullesteins dedicated the Hillside Garden both to "[the determination] that every succeeding generation shall be aware of the privilege to maintain and to utilize Cornell," quoting Liberty Hyde Bailey, and "to all the Plantations Staff that made possible the Hillside Garden."

Awards

The American Society of Horticultural Science has presented their 1989 Award of Excellence to Robert E. Becker, extension specialist and associate professor of horticulture at the New York State Agricultural Experiment Station in Geneva. The ASHS cited him for his dedicated and effective work in the area of agricultural extension, and called his work "a model for other informational extension efforts." Becker has been involved in extension work as both an agent and a specialist for nearly 30 years.

William G. Tomek, chairman of the Department of Agricultural Economics, is the 1989 recipient of the American Agricultural Economics Association's Award for Publication of Enduring Quality. Tomek was also named a Fellow of the AAEA, which has some 5,000 members.

Three members of the Cornell faculty have received the Blue Ribbon Award for an outstanding entry in the 1989 "education competition" sponsored by the American Society of Agricultural Engineers. They were cited for producing an 88-page Cooperative Extension booklet "Farming Alternatives: A Guide to Evaluating the Feasibility of New Farm-based Enterprises."

The recipients were Nancy Gruden Schuck, education director of the project; Wayne Knoblauch, associate professor of agricultural economics; and Judy Green, coordinator of the Farming Alternatives Project. Mary Saylor, an associate professor of extension education at Pennsylvania State University and a collaborator in the project also received the Blue Ribbon Award.

American Indian House

An American Indian House, which will be closely integrated with academic programs, has received approval that will allow construction of a building within the year. The program will be jointly administered by the vice president for academic programs and the dean of the College, which is the seat of the seven-year-old American Indian Program. The building will house 35 undergraduates—half of them non-Indians—and will include an apartment for visiting faculty, space for a resident graduate student, several offices and possibly a library or seminar room.
Futures in Agriculture

MOBIL OIL CORPORATION, THE Prudential Insurance Company of America and Dow Chemical came. So did AT&T Bell Laboratories, Chase Manhattan Bank and IBM. In all, some 90 major U.S. corporations sent representatives to the 1989 Cornell Career Fair, held at Willard Straight Hall September 13 to 15. And all had one thing on their minds: attracting young, Ivy League quality talent to their respective companies.

For students in the College of Engineering, there was no shortage of opportunities. Students in the Johnson Graduate School of Management also seemed to be in high demand. But for seniors graduating from Cornell’s College of Agriculture and Life Sciences, the message seemed to be that if they want to make it in agriculture, they should be prepared to specialize.

Representatives interviewed at the fair explained that while there isn’t a shortage of agriculture-oriented jobs in today’s market, there is a definite shift from farming opportunities to more technical fields; thus the need for specialists.

Case in point: Monsanto Agricultural Company. Based in St. Louis, Monsanto markets high-value chemical and agricultural products, pharmaceuticals, low-calorie sweeteners, industrial process equipment, man-made fibers, plastics and other performance materials.

“I would say there have been fewer agriculture openings than there have been in the past,” said Monsanto representative Christopher P. Daum. “There’s been a big shakeout from the manufacturer right down to the farmer. There’s more mechanization, so in all there’s been fewer openings.”

That’s why, Daum said, many recent agriculture graduates have expressed interest in hi-tech companies like Monsanto. Among the students Daum said he had spoken with were food science and agricultural engineering majors, in addition to non-CALS majors such as those in chemistry and engineering.

Environ Project Manager Richard B. Kapuscinski ’75 also noted that, as is the case with Monsanto, agriculture is becoming more integrated with other fields. Environ, also a participant in the fair, examines the effects that pesticides have on the environment. Company specializations include environmental and chemical science, chemistry and toxicology.

“We have talked to quite a number of agriculture students. I think that was the case last year, too,” Kapuscinski said. “What I’ve told them is that we are interested in students with a broad science background who are interested in the environmental aspects of what we’re doing.”

Both Daum and Kapuscinski noted that this trend is not new. Mechanization has been taking place for 30 years and farmers have been faced with foreclosures and the like since the early 1980s.

It’s for that reason that Bill Alberta, coordinator of career development for the ag college, said that although the trend has just recently become more widely known, most Cornell ag graduates are prepared to enter today’s job market. They have no misconceptions, he said, that there is going to be a surplus of jobs waiting for them on farms.

“It’s true there are a declining number of farms,” Alberta said. “But a lot of the opportunities are more exciting than ever before.”

At least that’s what the participants in this year’s career fair would like to think.
1979–1989
Looking Back at the Decade
About the Issue

There’s not much left to the month of December, and soon we will celebrate the end of the decade. Where does time go? This issue of the *Countryman* is dedicated to the times: past, present and future. We realize the importance of time and document for you how time stands still when you look back at it as a memory, how it absorbs you as you live in a today and how it leaves you with expectations of an unknown but often predicted future. The Cornell established by founders Ezra Cornell and Andrew D. White is different from the Cornell we experience today and who knows who or what the future of this dynamic institution will be?
WHAT PERSON DOESN'T DROOL AT the thought of taking a bite out of a big, red, crunchy, juicy apple? There aren't many that don't. The Cornell apple orchards have been providing the Ithaca and Cornell communities with such mouth-watering apples since the turn of the century. If you have never been to the Cornell orchards to buy yourself a bushel of apples, perhaps you should go—and while you are there, check out what goes on behind the scenes, too.

The Cornell orchards is not just a place that sells apples. You can find a variety of jellies, jams and marmalades there, plus honey and pure maple syrup. They also grow and sell pears, cherries, peaches and a host of small fruits such as blueberries and strawberries. According to Don Kenyon '65, who has been farm manager at the orchards since 1972, producing all of these fruits is a year-round and full-time job. "Besides harvesting and selling apples," said Kenyon, "we have to be concerned with research, crop production, maintenance, and cider."

That is right, cider. About two-fifths of all the apples harvested from Cornell go into cider production. Astonishingly, about 10,000 bushels of apples go towards making 30,000 gallons of cider annually. Cider production runs from about September to May and it is all produced right there on the store's premises.

Kenyon said that the other 15,000 bushels picked each year are sold for fresh use. The apples grown at the orchard include McIntosh, Empire, Paula Red, Red Delicious, Golden Delicious, Jonagold, Ida Red, Northern Spy and Crispin. The harvest of apples begins as early as August and runs until about the end of October.

"We research, demonstrate, pick, store, grade, package and sell them," said Kenyon. After the apples are picked, they are stored on the premises either in refrigerated or controlled atmosphere storage rooms. The controlled atmosphere system was developed at the Cornell orchards by the late Robert M. Smock and it is now used worldwide.

After storage, the apples are graded on quality and sorted out for cider and fresh use. The apples must then be packaged into plastic bags with drawstring tops and be priced before they can be set out for sale. The apples are sold in half pecks, pecks and half bushels.

Although most people know of the Cornell orchard and its location across from Cornell's B-Parking lot, most people are not aware that the orchard has a second location in Ithaca's outskirts. "In the late sixties Cornell realized that we had to start a second operation to take care of the perceived future needs of the pomology department, so in 1972 we opened our second farm right next to [Cayuga] lake in Lansing," said Kenyon. The Lansing farm is planted to approximately 25 acres compared with Ithaca's orchard of about 40 acres.

According to Kenyon, the land devoted to orchard in Ithaca has been shrinking. He attributes this to the non-farm development of previous orchard land.

Both orchards prohibit the public from coming in and picking apples off the trees. It is too difficult to control and coordinate such an activity with the various research needs that the orchards serve, said Kenyon. There is a lot of research that takes place using the apples and only research assistants are allowed to harvest the apples for that purpose, said Kenyon. "When the research is done, we allow the public to come in and pick up the drops at reduced prices."

When it is apple picking season, there is a lot of work to be done. The bulk of the apples sold to the public is generally picked by local temporary labor. When the harvesting season is over, there are usually six full-time employees: four on the production side and two in sales.

The Cornell orchards are open daily from 8:00-5:30 and are located on Route 366 just across from the B-lot. With such a wide variety of apples and fruits, plus delicious cider made right in the store, it is worth the trip to go and check it out.

by Christina M. Granados '90
THE YEAR 1989 MARKS THE END OF an exciting decade and brings about reflection on the past and on the changes that occurred. The College of Agriculture and Life Sciences is no exception to change. A look into the past ten years shows the trends of five departments within the College and provides an outlook on their future.

Since 1979 the number of students in the Department of Agricultural and Biological Engineering has declined slightly. Gerald E. Rehkugler, department chairman, explained, that a smaller number of students are coming from farms and production agriculture. "The department now attracts more students with an urban, suburban and a biological science background and interest, rather than students with a basic agricultural background," Rehkugler said.

Within the department there has been an increase in the interfacing between engineering and biological sciences. Rehkugler explained that a substantial amount of research is directed toward biological engineering compared to ten years ago. The department is also getting more involved in difficult environmental issues including land areas, disposable waste and how waste can be modified through the application to land.

What can you expect to see in the future for the agricultural and bioengineering department? "By the year 2000 a shortage of engineering and science graduates is predicted," Rehkugler said. In order to counter the trend, the department is offering research experience for undergraduates. The research program, sponsored by the National Science Foundation, has been successful in the past few years. As Rehkugler said, the department hopes to reverse the downward decline. "We are optimistic that we can interest more students into the major and increase the interest into the '90s."

Another department which has experienced a decline in the number of students in its major is the Department of Animal Science. J.M. Elliot, department chairman, explained, "The decrease in applicants reflects a national trend." One reason for this trend is the decline in the number of applicants to veterinary college which is reflected in fewer pre-veterinary students.

Major changes in the undergraduate program over the past ten years have been the combined effort of the animal science department and the poultry and avian sciences department. The department has strengthened its program in dairy management and has added a course in animal growth as a result of new and exciting information coming to light. "We are heavily into modifying the chemical composition of animals right now, which will help us get more in line with the national dietary goals," Elliot said.

The animal science department has room for more students and has plans for making the field more attractive to potential students. "We may put more emphasis on the equine interest that many students seem to have and offer more courses in this area," Elliot said.

The department is also increasing its recruiting efforts. "In the past we have done very little recruiting since we didn't need to. Now we may have to try a little harder to interest students," the chairman said. Elliot is optimistic though that the number of students in the major will stabilize.

Yet another department which has seen a drop in student enrollment over the past ten years is the Department of Natural Resources. But unlike the animal science and the agricultural and bioengineering departments, this department's reduction has been intentional. J.P. Lassoie, department chairman, said, "The decline has been a conscious effort on part of the department to decrease the number of undergraduates." The group had to be reduced to a number that the staff could handle.

"The goal of the department is to bring together applied biology with the area of policy to make management decisions," Lassoie said. The department emphasizes the areas of natural resource management, and renewable natural resource sciences: forests, fish and wildlife. The department also has a strong orientation toward policy and planning, which includes aspects of the social sciences and humanities. The courses focus on the concerned needs of people and use an applied orientation to deal with real world problems.

The trend for the future is toward...
areas of environment. "There is more of an interest and pressure from students to learn about environmental problems, for example water and air quality, deforestation and global climate," Lassoie said. Students with increased interest in environmental issues are demanding studies and disciplines that can be applied to real life problems. "As the students' interest in this area increases, we will try to increase our capabilities to meet these demands," he said.

Throughout the decade two majors in particular have grown considerably—agricultural economics and communication. Since 1979 the Department of Agricultural Economics, which is the largest major in the College, has increased its size by over 200 students.

William B. Tomek, department chairman, said, "The increase in the department is demand driven. Since the late '70s interest in the private sector has expanded." Many students want to go into business for themselves or into the business market. Even with the increased interest in the program, the chairman explained, "We are not looking to grow any more than we have; we want to stay at a steady state."

Within the department there has been an increased emphasis on small business management growing out of the interest in farm, food and management principles. Tomek explained that the department tries to provide an educational program for both students who want to go back to their family farms and for those who want to go into other businesses.

Tomek thinks that a number of important courses offered by the department do not get the attention they warrant. "Resource economics and courses dealing with environmental quality are a strong area," Tomek said. "Undergraduate students, however, seem to lack an interest in taking these courses."

In the near future, the department is looking to modify introductory courses in order to focus on global issues and natural resources. "The courses will make freshmen think about important issues and entice a few into other programs dealing with these issues," Tomek said.

In addition to the course changes, Tomek said, "The quality of students has increased enormously, we have some super students. Our standards are also higher. We want to be an outstanding department and we are continually questioning ourselves and trying to improve."

The Department of Communication is the other major which has experienced a surge of interest. The department has doubled in size since 1979. According to Royal D. Colle PhD '67, department chairman, it has grown because the communication field has grown in importance. "We are living in an information age and students see a lot of glamour and opportunity in the field," Colle said. "We are just going and growing with the flow of the times."

The program has grown both in quality and diversity within the last ten years. "We have reorganized the curric-ulum and developed five sequences within the major," Colle said. "The sequences help students focus a little bit more in the field." The increased activity in the department is also due to the substantial growth in enrollment in courses of students outside the department. "I see this trend as a dual growth," Colle said.

To keep in step with the growth of the major, "The department has enlarged its staff by adding excellent quality faculty members," the chairman said. The department, however, does not plan to grow any more. "Our plan is to stabilize the department in order to ensure a quality education," Colle said.

One aspect of the major that has not changed over the years is the emphasis on general principles. "The major is not technology-driven, but rather basic principles are emphasized, as in the writing, listening, and planning courses," he said. The principles provide a practical basis in the business world. "We build an education on principles which don't become obsolete as much as the hardware does," Colle said.

The new building on the ag quad, Academic I, also affects the department. "This is the first time in 40 years that the whole department will be under one roof. It's an exciting way to begin the new decade and it will facilitate team work among members. The interaction will have a synergetic effect on the program," Colle said.

The departments within the College have undergone some important transitions throughout the decade as a result of national trends, student interests and prospective goals. Reflection on the past can give you a good idea of where the departments are heading. And in accordance with the tradition of the University, change is a sign of development and a means of preparing for the future. by Laura M. Glazier '90
Using Winter's
by Sara J. Frank '90

IF YOU HAVE EVER EXPERIENCED an Ithaca winter or you spent longer than you wanted to in the frozen foods section of your local grocery store, then you know what cold is. But there is more to winter or cold than sweaters, mittens and frostbite.

Skiers, ice skaters and tobogganers are some who have recognized and exploited the richness that cold has to offer. But how many of us have considered the cold a natural resource that can be rendered useful as an energy saver?

Methods for using nature’s perennial wintry product to refrigerate foods during winter months have gained attention from Cornell University researchers. They know that cold is a feasible refrigeration source, the logical opposite to solar heating and manageable.

About 12 years ago, Robert R. Zall PhD ’68, professor in the Department of Food Sciences, recognized the potential and value of using winter weather as a means of saving money in energy costs. "It all makes good sense to me," said Zall. "I just stood back and asked myself, how can I utilize this (winter cold) to make it an advantage?"

If put in operation, winter's cold could mean "cool" cash for food processors, supermarket operators, dairy farmers and consumers and would offer substantial savings in energy. Taking the 33,000 supermarkets that exist in the United States as an example, it is reasonable to believe that they use coldroom compressors for their refrigeration purposes. About one-third of these stores do business in cold weather climates and would be able to use winter cooling as an auxiliary system for at least three months of the year, Zall rationalized. "That's a lot of savings."

Winter’s cooperation can be witnessed today in a poultry processing plant in Odessa, N.Y. Set up by Zall and his co-worker Joe Chen PhD ’70, the plant demonstrates energy conservation techniques in an industrial setting. They installed a cooling device on the plant’s roof for chilling the water that is used to keep the slaughtered birds cold, wash carcasses and clean equipment.

They also provided the plant with a cooler. Instead of using mechanical refrigeration when the cold conditions of the outside could do the same thing, the plant makes use of heat exchange units. The units, similar to a car’s radiators, were added onto an already existing refrigeration system. Whenever the climate is appropriate, the cooling needed to keep the coldroom between 34 and 40 degrees Fahrenheit is provided by the naturally existing conditions of the outdoors. The different products stored in this environment are monitored for their quality.

In his research, Zall has found at least three different approaches to providing cooling that can be integrated into an existing refrigeration system when the cold of winter is feasible: 1. cold air admitted directly from the outside through a coldroom to cool walk-in coolers; 2. cold air used to cool circulating liquid which in turn makes ice for ice bank cooling; and 3. cold air used to produce snow/slush ice by misting water into a controlled environment where slush/ice was stored or used directly as a refrigerant.

To the best of Zall’s knowledge, winter coldness refrigeration systems are not being utilized to any extent on a commercial scale to keep food products cool. "It's all so simple," said Zall a little confused by this. "It's not difficult (adding the system) and it's economically feasible... but I don't think people have thought much about it... nature has been so good to provide us with a free and abundant natural resource." As the price of energy and electricity go up and harmful environmental impacts increase with the use of various systems to produce energy, this refrigeration system is going to be "more and more attractive," said Bruce John, Director for the Small Business Energy Efficiency Program (SBEEP) for Cornell Cooperative Extension. "Its potential is in industry." SBEEP is funded by the New York State Energy Office and is operated through the Department of Agricultural Engineering in the ag college.

The food industry, including processors, handlers and cold storage services, uses a lot of energy for refrigeration. A good example is supermarkets whose energy costs go mainly for refrigeration. "Anything we can do to reduce this cost is worth developing," said John.

The small business program that John started about four years ago has assessed energy costs for over 12,000 small business, non-profit organizations and farms. If these businesses ap-
VHILL

plied John’s suggested changes for more efficient and cheap energy use, which includes Zall’s system, their total potential savings would be a staggering $12.8 million. Current figures show that this is an average of $1,024 per year per business. It would only cost a business $1,762 to make the changes in existing systems with an average pay back of only 1.7 years. “After that it’s all gravy,” said John.

Zall has estimated, taking into account geographic areas of the nation where cold weather is seasonally available, that just by using cold air in milk storage facilities from November through March in the northern half of the country, about 1,25 trillion BTU’s of energy could be conserved. That is equivalent to using 600,000 barrels of oil to provide energy.

“The dollar savings that can be achieved by using winter coldness vary with air temperature and energy cost,” said Zall. “Despite atypical winters, for the most part cold weather periods are repetitive from year-to-year.”

Nationally, climatic areas where cold air might be used are determined by looking at different “heating degree days”. A degree day is the difference between 65 degrees Fahrenheit and the average of the high and low temperatures on a given day. “The feasibility of using cold weather appears to be broad based and could be applied across much of the United States,” said Zall.

Off-peak power is the answer to the sarcastic question of how do you use winter’s cold air to refrigerate during the summer. When frigid air cannot be used, both energy and economic advantages are achieved by producing chilled water during off-peak times when energy consumption is low—such as at night when people sleep.

Area utility companies are very receptive to Zall’s approach to energy conservation because they realize the importance of systems that provide better energy efficiency and lower costs, and the detrimental impact of squandered resources.

Although there is no energy crisis now, “Energy costs are constantly going up and the potential for some kind of energy crisis is high,” said John. “No one can ever predict when one will happen.” Until the U.S. develops appropriate technology to utilize alternative energy sources or incorporates new energy conservation practices, we will always be dependent upon imported fuels and foreign countries, said Zall.

A conservationist by nature, Zall’s advice to those reluctant to change or uninformed about energy saving systems is to stop and think, “What do we need and what can we do to help?”

We also need to look at the costs, limits, harm and exploitation of nuclear power, gas, coal, water, wind, fossil fuels, electricity, etc. as sources of energy and to find alternative means to provide it, said Zall. “We need a better power distribution system.”

It has been proven that winter coldness refrigeration works, saves energy and saves money. “What we are trying to do is simply take advantage of what we have all around us for free in the long winter,” said Zall. “We are a very wasteful society and we need to do something about it.”

Results from experiments using winter coldness have yielded the following conclusions.

1. Winter air can be used to refrigerate coldrooms operating at 32-40 degrees Fahrenheit or 0-4 Celsius.
2. The amount of refrigeration available to cool a coldroom is limited only by the amount of air that can be delivered to an area and by the temperature of the air.
3. Rooms cooled with winter cold air will probably smell fresher and are drier than rooms cooled with mechanically refrigerated systems.
4. When available, winter cold air can save much of the energy costs of cooling a walk-in cooler.
5. Winter air cooling systems can cool a coldroom faster than mechanical cooling systems because excess cold air can be delivered through the system.
6. There appears to be no significant difference in bacterial growth in food-stuffs stored in coldrooms refrigerated with outside air or mechanically refrigerated air.
7. Winter cold air can cool refrigerants which can then be used to build ice in sweet water ice systems.
8. The economics of building ice in sweet water cooling systems appear to be favorable.
9. Add-on, cold air refrigeration schemes to supplement existing cooling systems appear to be feasible.
WHAT DO GOLDENROD PLANTS, ANTS and honeydew all have in common? They all play a role in a mutualistic relationship, explained Dr. Richard B. Root, professor of ecology and systematics and professor of entomology at Cornell. “A mutualistic relationship is one in which all members benefit from their interactions.”

The goldenrod plant, an inhabitant of abandoned fields and roadsides, plays host to 106 plant-devouring insects, two of which are vital to its success. The two insects, ants and treehoppers, have developed a relationship primarily to benefit themselves, but in the process, benefit each other and “accidentally” benefit their host, the goldenrod.

This mutualistic relationship begins quite interestingly, as Root pointed out. “A treehopper will land on a goldenrod’s leaf and remain for a day or so. If enough ants come by to ‘tend’ (protect) it, the treehopper will remain to lay eggs and to feed. Realizing protection from the ants is available, the treehoppers will infest and feed on the goldenrod by probing their straw-like mouthparts into the plant’s plumbing and sucking up its juices.”

The juices that the treehoppers extract are the plant’s nutrients; proteins, carbohydrates and sugar. These voracious insects then process the sap into amino acids for their own utilization, but excrete the sugar as honeydew which the ants feed upon. Even though this honeydew is really the treehoppers’ feces, the ants relish its sweetness and will protect their nectar source by warding off treehopper predators, explained Root. “It has been shown that if you remove the ants from a goldenrod plant, the treehoppers’ mortality rate goes up. In other words, they really benefit from the ants patrolling up and down the plant’s stem.”

Root explained that the relationship between the ants and treehoppers can definitely be classified as mutualistic since both parties receive benefits. However, he stressed that the goldenrod is not a member of the relationship because it benefits by “accident”—only as a mere consequence of the ant-treehopper interaction. Root pointed out that the plant receives no short-run benefits from the treehoppers’ feeding habits, making it impossible to label the goldenrod as a member of the mutualistic relationship since all parties must profit. Thus, the plant plays an active role in the relationship by hosting the ants and treehoppers, but it is not a member.

This mutualism between the ants and treehoppers has been scientifically proven by Root, Peter B. McEvoy Ph.D ’77 and Frank J. Messina Ph.D ’82. Both McEvoy and Messina are past graduate students who conducted research under Root’s direction several years ago.

McEvoy’s 1977 Ph.D thesis on the ant-treehopper mutualism showed that “seasonal survivorship” of the treehoppers increased more than “twenty fold” when the ants were present on the goldenrod. McEvoy, an associate professor of entomology at Oregon State University, was aware that the ants benefitted from the interaction by eating the honeydew, but needed to show the treehoppers’ benefits before proving the relationship between the two insects was mutualistic. Since his discoveries showed that the treehoppers profited from ant protection, McEvoy proved that the interaction was indeed a mutualism.

Messina, a past researcher at the Boyce Thompson Institute for Plant Research at Cornell, and currently an associate professor of zoology at Utah State University, discovered in his 1978 study that goldenrod plants infested with treehoppers and ants “were initially taller, grew twice as much in height and produced nearly seven times as many seeds as goldenrod plants which were not infested with these two insects.” Messina published these findings in his 1981 article, “Plant Protection as a Consequence of an Ant-Membracid (treehopper) Mutualism.”

Messina found these results to occur only in years when leaf beetles were abundant, meaning the ants, in fear of a decreased honeydew supply, worked more diligently to prevent this treehopper competitor from feeding on the goldenrod. This decrease in leaf beetle damage ultimately insured adequate plant resources for the treehoppers to produce their honeydew. So, in chasing away such treehopper competitors as the leaf beetle, the ants are simultaneously insuring that their honeydew supply remains abundant and existent while accidentally protecting the goldenrod from a destructive herbivore.
Root added that this relationship between insect species “changes the ecological stage” and “results in a different cast of characters on the goldenrod. If the ants and treehoppers are there [on the goldenrod] the leaf beetles and caterpillars will not be,” he explained. This is important because certain insects will devour the plant in the absence of the treehoppers and ants.

“This shows there are many ramifications that go beyond the mutualism,” explained Root, “such as how the plant benefits as an outcome of the relationship.”

Another potential, but indirect benefit to the goldenrod was demonstrated in McEvoy’s study. He showed how the ants’ presence caused the treehoppers to excrete the honeydew passively, meaning a drop at a time instead of propelling the waste all over the goldenrod. McEvoy discovered a honeydew-covered plant was detrimental as it attracted many treehopper predators, formed a film over leaf surfaces which could possibly inhibit photosynthesis and was a culture medium for fungi that might harm the plant. Thus, McEvoy and Root concluded that the mutualism between the two insects helped protect the goldenrod. “The ants perform a sanitary function by eating the drops of honeydew and thus removing a condition that could foster disease or cause damage,” explained Root.

Root added that the ant-treehopper mutualism results in indirect benefits to insects as well. In the course of protecting the treehoppers from predators and competitors, the ants accidentally benefit another insect known as the lace-bug. This bug lives in harmony with the treehoppers and ants, but it is not directly involved in the mutualism. The lace-bug, like the treehopper, sucks the goldenrod’s juices and produces honeydew, but the ants do not pay the insect or its product any attention.

“This is an indirect outcome of the mutualism between ants and treehoppers,” said Root. “The ants do not recognize lace-bugs, but they [lace-bugs] tend to flourish and survive better because their predators have been removed by the ants.”

Much uncertainty surrounds this odd situation between the lace-bug and ants, explained Root and Katherine Bartlett ‘87. Under the direction of Root, she conducted research on the lace-bug’s relationship to the ant-treehopper mutualism for her honors thesis.

“I do not think the ants are helping the lace-bug, but rather the lace-bugs are receiving a side benefit from the ant-treehopper mutualism,” explained Bartlett.

She feels lack of communication explains why the ants will not eat lace-bug honeydew. “I do not think the lace-bugs have evolved any behavioral pattern with the ants. You see, in order for the ants to feed on treehoppers’ honeydew, the ants stimulate the insect,” said Bartlett, “and the treehopper secretes a drop of honeydew to the ant. But, the lace-bugs just spray their honeydew all around the plant.”

Bartlett concluded that a correlation definitely exists between the ants, treehoppers and lace-bugs, but said a direct relationship between the three has yet to be discovered.

“The lace-bug example illustrates how one biotic interaction between the treehoppers and the ants can have ramifications that influence other things,” explained Root.

Ecological interactions between insects on plants are “interwoven and subtle,” Root pointed out. “They illustrate how the complex webs that exist in nature can often lead to consequences that are difficult to predict.” As an example, Root is especially concerned with the effects of destroying an insect species. Because insects influence each other directly, as in the case of the ants and treehoppers, and indirectly, as in the lace-bug-ant-treehopper example, it is important but difficult to predict the results of eradicating an insect.

Root mentioned that the real worry lies in crop-insect relationships. A farmer could innocently spray his alfalfa field to kill the perceived “harmful” insect, when in reality that insect might be involved in a complex web that suppresses a more harmful insect.

Root began studying goldenrod in 1977 because it is a native plant and has a “long evolutionary history in New York state.” He wanted to research a plant that possessed an evolutionarily complete system and one that was experimentally easy to manipulate, such as for making clones. Through his years of research, Root not only discovered the interesting consequences surrounding the mutualism between the ants and treehoppers, but also discovered other webs of interactions that exist between the 106 goldenrod feeders and the goldenrod’s genetic traits.

“The research between the ants, treehoppers and goldenrod is only a minor part of our work on the goldenrod fauna,” explained Root, “which is focused on the impact of herbivores on the evolution and productivity of plants in natural communities.”
DR. RICHARD G. WARNER, PROFESSOR OF ANIMAL NUTRITION IN THE DEPARTMENT OF ANIMAL SCIENCE SINCE '51, ROAMS AWAY FROM HIS Ruminants AND TOWARD RETIREMENT IN DECEMBER '89. HE HAS TAUGHT OVER 3,000 STUDENTS, AND CONDUCTED OVER 40 YEARS OF RESEARCH, AND HE KEEPS IT IN PERSPECTIVE: "I GET A KICK OUT OF MEETING STUDENTS WHOSE PARENTS WERE ALSO MY STUDENTS, OR RUNNING INTO FORMER STUDENTS WHO HAVE MADE IT IN THE WORLD."

The stacks of papers on his desk overflow onto the windowsill and the floor. At times, Warner is one man surrounded by a lifetime's work... literally.

I entered his office, expecting him to look at me, smile, and quickly think of an excuse to postpone our appointment. "Hello. Come in," he said with an inviting tone, mentally and physically pushing aside his paperwork.

"That is the one thing I was most impressed with when I started working for him," said Terry Kinsman, Warner's secretary for four years. "He is always receptive and responsive to students. No matter how behind he is, he will find the time to talk with them."

Warner agreed that he likes working on a face-to-face basis with students, especially undergraduates. "Young people will not take 'yes' for an answer," he said. "They come into the introductory courses wide-eyed and interested."

He once was the wide-eyed novice that he enjoys teaching. "I have wanted to be an animal nutritionist since I was a junior in high school," said Warner, whose father worked for the United States Department of Agriculture.

After graduating summa cum laude from Ohio State University with a BS in agriculture in '43, he served as a first lieutenant in World War II from '43 to '46. Warner received his MS in animal nutrition in '47, and obtained his PhD in animal nutrition from Cornell in '51. Except for visiting professorships while on sabbatical leaves in Cauda, Sweden and Brazil, he has remained at Cornell.

"I have spent every year trying to upgrade the presentation of my courses," said Warner. He understands how students think and uses some attention-getting devices that really work.

If you walked into the lecture hall before the start of Warner's introductory nutrition class you would find anything from a cartoon to rat feces on the overhead, and a "thought for the day" (TFTD) on the blackboard. If you attended his first lecture of the semester you would remember the echo produced by Warner banging the roots of a corn plant against the stage to demonstrate how information is best committed to memory.

"He never lets his teaching slide," Kinsman said. Warner taught an introductory course in livestock nutrition for a total of 27 years, Principles of Animal Nutrition for nine years, and the advanced Laboratory of Animal Nutrition for 13 years. Even in his last year he asks his students for course evaluations, and works at improving his teaching approach.

"I have received good feedback on my teaching," said Warner. "And I feel good about that." He was elected the Professor of Merit by the undergraduate seniors of the College of Agriculture and Life Sciences in '84, and given both the Edgerton Career Teaching Award and the Gamma Sigma Delta Innovative Teaching Award in '88. And, in '89 the American Society of Animal Science honored Warner with its Outstanding Teaching Award.

"I GET A KICK OUT OF MEETING STUDENTS WHOSE PARENTS WERE ALSO MY STUDENTS..."

Although Warner considers teaching to be the most important part of his Cornell career, he has conducted extensive research with over 40 graduate students. His studies comprise rumin (stomach) development, feeding, and management systems for calves and the nutrition of various species of animals. He belongs to several agricultural honors societies, including the Animal Science Hall of Fame at Ohio State University.

When Warner retires he will take it all with him, leaving a foundation for those who will replace him. Kinsman said she "does not want it to end," but knows that Warner will still be around campus. "It is going to take forever to clean out his office," she said jokingly.

Warner plans to channel his energy into community activities like the Ithaca-Cayuga Rotary Club and the First Presbyterian Church. He also looks forward to spending time traveling with his wife, Bibs, one of his major support systems throughout his career.

"It will be tough not being around young kids," admitted Warner, who raised four daughters. However, his life is not void of youngsters with two granddaughters recently initiated into the family. "I have had a great career. You cannot beat a place like Cornell."

by Karen de Seve '90
At worst, Dudley Poston is a hard worker. At best, people who know him find it hard to fault him. Flexible, compassionate and diplomatic are just a few of the adjectives used to describe him. A newcomer to Cornell in the summer of 1988, Poston is now chairman of the Department of Rural Sociology in the College of Agriculture and Life Sciences. First and foremost he is a demographer who has dedicated himself to the study of the population trends in Asia.

1981 was a major turning point for Poston, who at that time had his hands full as the Director of the Population Research Center at the University of Texas at Austin. "Up until this time," Poston said, "my focus had been on the demography of the United States. The appearance of three bright, mature and ambitious students from mainland China changed all that." As their academic advisor at the university, Poston became keenly interested in the demography of their country. He has been studying East Asia ever since.

Poston was offered a job at Cornell in 1987. The university's interest in the agriculture and related population dynamics of Asia made the invitation irresistible for Poston. He accepted and came to Ithaca with his wife Pat in July of 1988.

Here at Cornell, Dudley Poston is an asset to the ag college. As chairman of the rural sociology department, Poston has considerable influence on the courses to be taught and where the department is headed in terms of growth and development. Rural sociology professor Tom Lyson said that Poston is "a good role model for everyone. He is hardworking and he is an excellent teacher. He has lots and lots of energy." Poston's secretary, Beverly Munson, said that Poston is honest and very interested in his students.

Poston continues to work with Asian students at Cornell and is presently engaged in five or six different research projects. Topics include the economic attainment patterns of foreign-born populations, gender and minority interactions and differences, single and siblinging children in China and the relationship between economic development and reduced fertility rates in China, Korea and other Asian countries.

Cornell post-doctoral student Zhongke Jia met Poston at the University of Texas and worked with him for two years. He came with Poston to Cornell in 1988. "I think Dudley has become one of the best in his field," Jia said. "His work is very well-known in Asia. He works so hard and yet he is always striving for more. That is what I have learned most from him—that one can always improve oneself and grow.

Dudley Poston is not just a chairman and a demographer. His reputation as a concerned faculty member is reflected in his direct involvement with students. Poston's position as faculty in residence at Clara Dickson Hall on Cornell's scenic North Campus, gives him and his wife Pat the opportunity to interact with students outside of the classroom. The FIR position calls for a two-year commitment in which the selected faculty member resides in a specific residence hall and becomes familiar with students on an informal basis. "The position," Poston said, "involves no disciplinary action. It is designed to encourage interaction between faculty and students. It is a great program and Pat and I really enjoy it."

On November 18, 1989 Poston will travel to China in order to resume his demographic research. His current project focuses on the social ramifications of China's most recent governmental demand that families limit themselves to having only one child. The concern, Poston said, is that "single" children may become spoiled brats or "little emperors." Poston is now collaborating with former University of Texas colleague and psychologist, Toni Falbo, to study the social and schooling patterns of single and siblinging Chinese children.

"Demography," Poston said, "is concerned with developing knowledge for its own sake. But we can also apply it over a very wide range of situations. We can use it to help determine immigration policies, to gain a broader understanding of foreign cultures and to project population trends. It is a fascinating field."

Poston says that he is very pleased with Cornell—with the students he has met, with the faculty and with the attention given to Asian studies. "I suppose it shows here more than it does in Texas," Poston jokes. But one can plainly see that he is pleased to be here. And Cornell, no doubt, is pleased to have him.

by Michele Pepe '91
WHERE WERE YOU TEN YEARS AGO today? Some of you might have been on campus, but many of you probably were not. Do you remember what was going on back then?

A program where people could purchase trees planted in the ag quad began in an effort to improve its image (above). "Two maple trees were purchased by David A. Nagel '49 and his family in honor of his good friend and classmate Patrick J. King '49. The two men were always together during their college years and now the adjacent trees on the ag quad represent the close and meaningful relationship between these two men" (Cornell Countryman, May 1979) . . . And, as always, Cornell was undergoing another campus beautification project; this one between and in front of Day and Stimson Halls . . . . One rivalry that will probably never die was still going on between Cornell and Ithaca College students: "according to some IC students, Cornellians are "bookworms," "pseudo-intellectuals" and "just plain weird." Cornell students, on the other hand, see IC as a "party school" with "jocks, druggies and morons" making up the student body." (Cornell Countryman, May 1979).

In 1989, Cornell's construction mania has produced Academic I, which will finally round off—or should we say "square off"?—the ag quad . . . . The new athletic facility on Alumni Fields and the glorious Theory Center are still being built and the Minns garden, to be expanded along Tower Road on the ag quad, is still in its planning stages . . . . Energy conservation (see page 6) has become more of an issue as we realize that our resources are limited and need to be protected. We are still aware of the rising prices of oil and gas, but in addition there is acid rain, the ozone layer, air, water and soil pollution among other things to worry us . . . . Increasing interest in cutting back on the cost of energy has led to the con-
The continued use of nuclear power, despite the incidents at Three Mile Island and Chernobyl. The nuclear power debate is still as heated as ever, if not more so; public awareness of the dangers of nuclear power has increased since the disaster at Chernobyl. Scientists have continued to speculate on other forms of energy, such as fusion and cold fusion. On a lighter side, Cornellians now say that IC students are overly defensive and expect Cornell students to be “snotty.” Interestingly, several Cornell students agree with the 1979 definition for today’s Cornell student. One Cornellian suggested that perhaps the rivalry only flares up when Ithaca College and Cornell face off on the football field.

“Hopefully, by 1999, we will be able to do something about Ithaca’s weather,” said Helene J. Ostrelici ‘90. “Cornell (above) would be encapsulated under a huge bubble like a grand-scale version of Epcot’s controlled atmosphere display,” Jamie McGillivray ‘90 said the people at Cornell will most likely become more snobby. “Right now, I don’t think Cornell has the same snobby attitude as Harvard or Dartmouth, but as its (attitude) changes, Cornell will become more Ivy League.” Will we be seeing more new buildings on the ag quad like the one below?

If we were to go by Professor James Maas, a psychology professor who told his Introductory Psychology students, “The best indicator of future behavior is past behavior,” then we would know that campus construction will still be going on in 1999. And, Cornell and IC students will still harbor their differences. Barbara Zanini ‘91 said she would like to see the pressure at Cornell ease off in the future; “College should be fun and challenging,” she said. In ten years, our children and grandchildren will probably be teaching us about conservation, reprimand us and retrieving the half-used piece of paper which we threw away. But perhaps there will be an end to the worries of the world’s energy problem. Will the answer be nuclear power, cold fusion or...
FOR CORNELL STUDENTS, FACULTY and staff, computers have become an intrinsic part of life over the past decade. However, constant technological advances present difficulties. How does the Cornell community stay in step with the latest computer software, hardware and applications?

Cornell Information Technologies—commonly known as CIT—keeps Cornell at the cutting edge of computing by providing instruction, support and advice. In spite of name changes and relocation, CIT has pursued computerizing Cornell since its creation as the Office of Computer Services in 1965. "CIT's purpose has always been to provide support for information technologies for campus," said Cecilia Cowles, Assistant Director of CIT's publications. "We have adapted our mission as technology has changed, grown and developed."

Cowles began her career in 1970 as a technical writer, processing text on a key punch. Eventually this primitive process was replaced by the typewriter terminal. But such simple tasks as writing papers on a computer were visions on a distant horizon.

"As recently as ten years ago, most computing was done on the IBM mainframe computer system," said Cowles. "The first personal computers were introduced on campus in the late 1970s." It was the beginning of the computer era and CIT, then known as Cornell Computer Services (CCS), knew that microcomputing was in Cornell's future.

"People were just starting to think about the idea that there were small computers that everyone could use," she said. "It was a revolution at the time."

In the early 1980s, personal computers were hardly found on campus. Most were used experimentally for programming in computer science courses. Terminals could be found at Uris, Clark and Upson halls, but their use was reserved for mainframe access.

"Most of the instruction the CCS provided in the early 1980s concentrated on mainframe use," Cowles said. "Our staff was much smaller than it is today. But as technology became more accessible and more facilities were created on campus, we were impelled to expand our staff and services."

Ironically, the computing boom of the 1980s created obstacles for CIT. "The goal was easier to achieve ten years ago, because technology was not as diverse as today," said Cowles. "We have had to struggle to stay ahead."

Thus, CIT expanded the roster of workshops and seminars and the number of applications it supports. The staff grew to over 200 employees and the organization moved to the Computing and Communications Center on the ag quad in 1987. That year, new Vice President M. Stuart Lynn renamed the organization to indicate their broadened scope of services.

CIT has kept Cornell aware of current advancements in information technology by providing services such as the Software Lending Library, which loans out new and public domain software. CIT also offers the Computer Resources Center for special production projects and the Service HelpDesk for consulting.

Publications including brochures and monthly newsletters keep Cornell abreast of computer news. CIT's technical documentation library possesses information on subjects such as mainframe networks and electronic mail.

"Students and faculty can use the mainframe to communicate with colleagues and collect research from around the world by connecting to larger networks," said Sharon Marcus, CIT's Senior Technical Writer. All students receive a mainframe account number in their registration information entitled 'Important Stuff.' The computer accounts are provided so that users can become more familiar with mainframes and their capabilities.

"We would like to see electronic mail used as often as the telephone within the next ten years," said Marcus. "Electronic mail eliminates telephone tag: you send a message, you receive a mes-
Networking is one of CIT's most important projects. Its goal is to make BITNET, a network that connects the U.S., Canada, Europe, the Near East and Far East) more accessible to Cornell through technology and instruction.

CIT has also become involved with projects inspired by computer vendors such as IBM and Apple to advance information technology. CIT is still feeling the effects of the successful joint venture with IBM called Project Ezra. The four-year project, which began in 1984, revealed Cornell's potential to become a leader in developing instructional programming. IBM donated 638 computers for Project Ezra, giving 329 faculty members the opportunity to create 264 programs to supplement their courses or departments as learning tools. Many of the programs developed received national attention.

Carrie Regenstein, CIT's Assistant Director for Instructional Systems, is currently working on the digital classroom project. The endeavor will help to deliver instructional software directly into the classroom.

"Computer projection is a technology that can help us enhance the learning process in almost any discipline," said Regenstein. "It is a powerful tool that CIT wants to put into the faculty's hands as soon as possible."

Interactive media will also become a frequent classroom tool in the future. "In the near future, we will see integration of video, sound and computers for instructional use," said Cowles. Interactive media works on the premise that listening and looking at things simultaneously facilitates learning.

"Interactive media allows users to learn at their own pace—it puts learning under their control," said Marcus. "I am sure that we will see more faculty involvement and more programs developed." Geri Gay, a member of the communication department and national expert on interactive media, has helped develop interactive projects for the entomology department and the language department.

However, CIT must overcome hurdles before every department uses computers in every classroom. "The challenge of our job is to uproot the staff, students and faculty to get them involved in computing," said Marcus.

"But it is a dual responsibility: those who are intimidated by computers have to overcome their fears," she said, "and CIT has to make information digestible and accessible." To do so, CIT will expand their schedule of workshops and seminars.

"Part of making computers more accessible is the need to alleviate the fear of using them," said Marcus. "Ten years ago, most computing was done on the mainframe. Faculty in the humanities, for instance, were less likely to use computers in the classroom because it required a lot of technical knowledge. Now, computers are much more user-friendly, but many are still intimidated."

However, the contributions to computing by the faculty in the College of Arts and Sciences are incredibly creative and useful. The English department has developed the award-winning PROSE program to make grading students' papers easier and to enhance professor-student communication. Professors can put comments right on the student's diskette and students can access grammar and style rules.

Looking to the future, Cowles predicts that large computers will become more powerful and small computers will become more accessible and easy to use. Workstations will also change. Powerful UNIX workstations such as the NeXT will become more ubiquitous on campus; and computing from the dorm, home or office will become easier through remote access to campus computing resources over networks.

"Imagine sitting in your dorm room, writing a paper and then being able to access the library's card catalog from your computer terminal," said Marcus. "You could transfer your bibliographical sources onto your disk and print right then." CIT is currently working on projects to connect dorm room computers with the Cornell library system.

There are also budgetary constraints to deal with. "A campus complete with UNIX machines is a dream, because of the cost," said Cowles, "but the price of technology will certainly decrease as it infiltrates our lives."

"There's a difference between what we would like to happen and what will happen," said Marcus. "There are so many factors involved: cost, changing technology, changing needs of computer users. But CIT aims to stay ahead and achieve our goals." With their mission in mind, the staff of CIT will maintain Cornell's position at the vanguard of advanced information technology.

CIT made the Computing and Communications Center on the ag quad its home in 1987. The picture shows the building before its renovations and before the arrival of CIT.
WHEN I WAS APPLYING TO CORNELL, I was interviewed by a local Cornell alumnus at home. I was naturally nervous and anxious—Cornell was my top choice and I knew that I had to make a good impression.

When he asked me what major I wanted to pursue and I told him communications, he looked surprised. After a long and uncomfortable silence, he responded, "Does Cornell have anything like that to offer you?"

Although the Department of Communication is one of the youngest departments within the College of Agriculture and Life Sciences, it is also one of the largest and fastest growing. In the past ten years, enrollment has increased significantly from the 129 applicants in 1980 to the 411 applicants and 54 matriculants in 1988.

According to the College's Admissions Office, freshman acceptance into the major is roughly 20 percent of all applicants, whereas the overall College acceptance rate is approximately 30 percent of those who apply.

Although there was no designated department for the field of communication until 1945, there were several courses and activities related to the field. In 1874 the world's first university-level journalism course was introduced at Cornell and the first bulletin for the College was issued in 1888. Gradually, more courses in the field were adopted and the services in publications and information grew steadily. In the 1920s, radio was introduced and by 1943, increased demand for motion pictures, slides, photos, graphs, etc. encouraged the establishment of a specific visual aids service.

In 1945, all of these various independent activities and services were finally united into a new Department of Extension Teaching and Information. The department pursued four major functions—research, extension, resident instruction, and international development. The department continued to grow rapidly, adding more staff members and publications to produce each year.

The work of the department had a significant effect on the field of communication. During the department's history, Cornell won more national awards than any other land grant university for excellence of its publication, press, and radio.

In 1966 the department's name was changed from Extension Teaching and Information to Communication Arts. The new title more appropriately represented the department's emphasis on providing a more significant structure for a "major" to its students as well as its efforts to provide a variety of courses in many areas of the field. In 1986, the Department of Communication was again renamed to more appropriately represent the increased involvement in research and social sciences.

"The name was subject to multiple interpretations," said Associate Professor Njoku Awa of the communication department. Students thought that the major offered study in the performing and fine arts when the most significant efforts were being put toward research in a variety of fields such as psychology, sociology and other sciences. The number of students and faculty involved in research was growing so significantly that the name Communication Arts was "no longer a reflection of the content of what was taught or the orientation of the research," said Awa.

The communication major is divided into five sequences which include public communication, electronic media, publication, interpersonal communication and science communication. Electronic media and science communication are both recent additions to the sequence options, with science communication still in its first introductory stages. "I think the science communication sequence is important because it matches very explicitly the missions of the College," said the Department of Communication Chairman Royal D. Colle.

In addition to specifying a particular sequence, students are strongly encouraged to pursue practical communication experience through part-time or summer employment. The department offers an internship program which is coordinated by Chris Whittle, a Senior Lecturer in the department. Students take advantage of the internship program in order to gain valuable experience as well as to earn academic credit. Over the last few years, the program has been greatly strengthened and improved to become a "first-rate operation," according to Colle.

Many students also participate in the many organizations, publications and media services available to them. Cornell established its own chapter of the Public Relations Student Society of America in 1987, and boasts a very strong membership. Other organizations include Cornell Women in Communications, Inc., Cornell Forensics Society and Madison & Tower, a student-run advertising agency serving the Cornell community. Through such organizations, students have the opportunity to work with numerous publications and media services in order to gain practical experience.

The communication department is currently looking forward to its move to Academic I in January. The department has been physically divided into three different buildings until this point and the move will finally centralize the department. "In some sense, we take on a new life," according to Colle. "It is the first time in four decades that we will be under one roof."

In the past decade, the department has successfully expanded its resources and its offerings to its students, faculty and the Cornell community.

"We have been given great support from the administration, especially at a time when budgets are extremely tight," said Colle. "The administration has recognized that the number of students has increased significantly over the past decade and that the resources needed to catch up."

Colle adds that the department would like to steer away from growth and concentrate on improving what they already have. "We are going to concentrate on getting better, not bigger," which remains consistent with the current objectives of the University.

by Jennie Tenser '91
WHEN YOU TAKE A LOOK AROUND the Cornell campus, two things you are bound to notice almost immediately are Fall Creek and Cascadilla gorge carving their way through the surrounding scenery. You simply cannot miss them; the twin gorges have been there for thousands of years and they are likely to be there for thousands more.

Not much is changing about the gorges in terms of their depth or width—at least not at any accelerated rate. But one significant change has taken place over the last few hundred years: civilization has come face to face with the gorges. Once pristine water now contains salt and petroleum washed into the gorges by neighboring roads and parking lots; even the walls of the gorges have not escaped the chemical invasion unaffected.

What has this done to the plant and animal life in the gorges? No one seems to know for sure, but some claim that such things could never be beneficial to life. Some also claim that Cornell is making the situation worse by moving major projects closer and closer to the gorges' edges.

"As there are more and more parking lots, one of the things environmentalists are concerned about is the amount of salt dumped into the gorges as well as the petroleum," said Nancy Ostman, head of the Cornell Plantations Natural Areas Committee. "This is also one of our concerns."

At this point, though, Ostman said little is known about the amounts of chemicals going into the gorges or the effects of chemicals on the gorges.

"Whether there are some species no longer living in gorges and there is a link between that and run-offs, I do not know," said Lewis Roscoe, director of Campus Planning at Cornell. "There is a concern, and I think that is good." Roscoe is quick to point, however, that it is only a concern; as people talk about the potential effects of chemicals on gorge life, progress continues. Currently, there is a concrete proposal for a parking lot on East Hill as well as expected proposals for two parking garages near the Cornell Plantations. The 1980s also saw the beginning of construction on the Theory Center and the complete construction of the Performing Arts Center, both located along the edge of Cascadilla gorge.

Although neither the Theory Center nor the Performing Arts Center is likely to send salt or petroleum into Cascadilla, Ostman added that new buildings—no matter where they are located—have a definite effect on the surrounding ecosystem. When building foundations get in the way of tree roots, they significantly shorten the trees' lives, if not killing them right away. So chemicals are not the only worry.

"When a new building is constructed along the gorges' edge, one looks and tries to anticipate how the two are going to work together," said John Ullberg, a landscape architect for the Campus Planning office. "In the case of the mentally sensitive, but that is not the case."

Furthermore, Hal Martin, who as foreman of the Cornell Plantations, in charge of keeping the gorges clean said that neither he, nor his staff members, have documented any major first hand negative effects of pollution on the gorges.

He and his staff do, however, have a long list of concerns. For starters, Martin is worried that run-offs from buildings, roofs, sidewalks and parking lots will intensify the probability of flooding and contribute to the erosion of gorge walls since more water is being emptied into the gorges over a shorter period of time. Martin also shares a concern with Ostman that salt and petroleum washed directly into the gorges could adversely affect the environment.

So what has been done to protect the gorges from uncontrolled progress? In 1972, Cornell's Board of Trustees passed a policy discouraging construction projects either along the shores of the recently restored Beebe Lake or in the actual gorges themselves. In the 17 years that have followed, however, nothing has been done to make that policy more specific. In other words, while there is a blanket policy, the question is to where the shores of Beebe Lake begin or what actually constitutes what is in the gorges has never been addressed.

"Campus Planning, the Natural Areas Committee and Cornell Plantations all need to work on a long range land use policy for a clarification of that issue," Roscoe said. "How close is too close? That question needs to be answered."

As for right now, Ostman said that abundant plant life remains in the gorges as well as some animal life.

What the next ten years brings may be a different story. ■

by Mark Styczynski '91
An ENTERPRISING Program

by Cyndie Shearing '90

THE PERSONAL ENTERPRISE AND Small Business Management Program is achieving its goal of exposing undergraduates throughout the University to the world of personal enterprise and small business.

Interest in the program began in October of 1982. At that time, faculty in the Department of Agricultural Economics approved a motion to explore the possibility of adding courses in the area of small business management. Provost W. K. Kennedy approved a proposal for the program early in 1984 and the first new course, Personal Enterprise and Small Business Management, was taught by Professor Emeritus Wendell G. Earle MS '48 PhD '50 during spring 1986 semester.

Earle, Bruce Anderson '68, Associate Professor of Agricultural Economics, and Richard D. Aplin MS '51 PhD '59, Professor of Agricultural Economics, are all members of the ad hoc committee responsible for expanding the program. Aplin said, “It is a very exciting program, which has made a difference to a large number of students already, in the relatively short time it has been implemented.”

Prior to the implementation of the program, a task force made up of interested alumni was appointed by Dean David L. Call '54 MS '58 PhD '60. This task force (now referred to as Advisory Council to the Program) has been instrumental in guiding and developing the program right from the start, Aplin said. Without their efforts, the program would not be where it is today, he said.

The addition of three new courses in personal enterprise and small business management, the establishment of a forum series with lectures by leading entrepreneurs and the inception of a summer internship program are major components of the program.

Jennifer L. Dembeck '90 and Pasquale Lanni '90 took Personal Enterprise and Small Business Management during the spring 1989 semester. They worked closely with Doug Blume, manager of the Hungry Bear Diner (on campus) for one of their projects.

As part of the project, Dembeck and Lanni wrote a business plan for the diner and designed a proposal for a delivery service. They analyzed the potential need for the delivery service in the Cornell community and estimated that it would be profitable after developing cash flow projections and examining the financial status of the business.

The plan they developed was received enthusiastically by Blume. “He loved the idea, and thought it would work,” Lanni said. Unfortunately, the delivery plan was never approved for implementation by higher management.

However, Dembeck still found the project to be worthwhile and she said that working on it gave her a chance to apply what she had learned to a real situation.

In addition to enrolling in Personal Enterprise and Small Business Management, which emphasizes the problems related to starting a small business, students can take two other new courses.

While enrolled in Counseling Small Businesses, students serve as consultants to small businesses located primarily in Tompkins County. This provides them with the opportunity to identify and confront real problems facing small personal enterprises. The application of theories and knowledge learned in the classroom to real business problems offers a valuable experience for students.

Students can also take Human Resource Management for Small Business, through the School of Industrial and Labor Relations, which was offered for the first time in fall 1988. This course is taught using a series of case studies developed from small firms and focuses on human resource management issues. A unique aspect of the course is that the owners and/ or managers of the firms being evaluated are present to interact with students and discuss each case.

Interaction with owners and managers of small businesses also takes place through the program's annual forum series, which was started in 1985. In addition to a large public lecture, forum guests interact with students in regular classes, informal sessions, receptions and luncheons during the typical 36 hour visit to the University.

Stuart and Jane Bewley of California Cooler discussed their experiences starting and managing the company at the first forum. Since then, several forums have been held with guest speakers including Bennett Cohen and Jeffrey Furman of Ben and Jerry’s Ice Cream and Mel and Patricia Ziegler of
Banana Republic Travel and Safari Clothing Company.

Murray Lender, former chairman of Lender’s Bagel Bakery, and current spokesman for the company, recently lectured as part of the forum series. He discussed his work with the company and his belief in his father’s dream of a “Lender’s bagel on every table” during his visit September 18, 1989.

The forum series is supported by the Moses and Loulu Seltzer Endowment Fund, which was established by Samuel M. Seltzer ’48 to honor his parents.

Learning from the experiences of individuals already established in business is a major feature of the summer internship program. Students work with top managerial people in small businesses for eight to twelve weeks during the summer break. They are paid for their work, but receive no academic credits.

Kathleen Gilmartin ’90 was one of those selected for the program during the summer of 1989, and she worked as an intern in the Human Resources Department of Cole Vision Corporation in Warrensville Heights, Ohio. She re-wrote an employee handbook as one of her major projects and assisted other employees in preparing materials and displays during National Eye Exam Month in August.

The contact with people in top level management constituted the most valuable part of the internship, said Gilmartin. As part of the internship, she was given the chance to spend one hour with each person in top level management, interviewing them about their experiences within the company and in the business field. It was a great opportunity, Gilmartin said. “After all, these are the people who have been through it all, and climbed that [corporate] ladder already,” she said.

In addition to relevant course work, internship opportunities and the forum series, students and those in the business community will eventually reap the benefits of applied research and extension work conducted as part of the program. This research will focus on problems and opportunities facing small businesses in New York state.

In the past, the applied research and extension aspects of the program did not receive as much attention as they should have, according to Aplin. However, a $1.5 million gift recently received from the directors of Actmedia, Inc. will support the program and establish an endowed chair, expanding the potential of the entire program.

The establishment of the Bruce F. Failing Sr. Chair in Personal Enterprise was made possible through donations from Failing’s wife, Elizabeth, his son, Bruce F. Failing, Jr., Norton Garfinkle and individual directors of Actmedia, Inc., the nation’s largest in-store advertising firm.

Michael A. Hudson, from the University of Illinois, was named the first recipient of the chair on May 1, 1989. Hudson, whom Aplin said is “an outstanding young professor very capable of leading this program” will be joining the staff of the College of Agriculture and Life Sciences as a full-time tenured professor in January 1990.

With the appointment of Hudson, and the $1.5 million gift to support it, the Personal Enterprise and Small Business Management Program is well on its way to achieving its goals.
Altering Genes

The summer of 1989 saw researchers at the Boyce Thompson Institute for Plant Research at Cornell University successfully complete the first field test ever using a genetically altered virus. This marks the first time that a genetically altered virus has been released into the environment with EPA approval. BTI is working on this project in hopes of developing a new biological-pest-control technique that does not depend on chemicals. This particular virus is meant to provide a chemical-free means of controlling a major insect pest that destroys vegetables.

The results of the field test have been almost exactly as the researchers had expected, with all of the insects dying within the expected time frame. Dr. H. Alan Wood, the virologist who heads the research on the virus at Boyce Thompson, said that the field test is "just one step of a lot of them that will be necessary to really make significant reductions in chemical pesticides."

The virus, *Autographa californica* nuclear polyhedrosis virus' (AcMNPV), infects a pest called the cabbage looper, a caterpillar that destroys cabbage, cauliflower, broccoli and several other kinds of vegetables. The virus is a "baculovirus," a type of virus that only infects invertebrates such as insects are susceptible to. Wood said that the host range, though, the number of insects that the virus can affect, is not limited just to this one insect.

"The virus we're using in this test has a very broad host range for a baculovirus," said Wood. "But most of them are very limited. In fact, they are so limited that there is a definite possibility that they will have trouble commercializing them. They're too targeted and specific and they're only going to kill one or two insects."

The virus is altered in minor proportions, removing just a single gene. "Basically," said Wood, "I'm taking out the major gene that controls the persistence of the baculovirus. Ultimately, I'm going to replace it with a pesticidal gene, but for the time being I'll leave it as a blank cassette."

The field tests in Geneva were done with this "blank cassette." Wood said that making sure that the virus will not be persistent in the environment is a very important and crucial step. The current engineered form of the baculovirus doesn't last for more than two days in a normal situation because it is inactivated by sunlight. But detectable amounts of it will persist in the soil for up to ten years. "It will persist in the environment for very long periods of time in the ground, it's not going to go away completely," said Wood. "Right now, about ninety-nine percent of it has already disappeared. But it will never be zero."

There has been very little opposition or protestation from anyone about the work being done, according to Wood. "The only negative feedback that I have encountered has been a bad review of our grant. And that was pretty minor."

Wood and his colleagues are working on a grant from the U.S. Environmental Protection Agency.

One person who has raised his voice against the field tests this summer was Jeremy Rifkin, president of The Foundation on Economic Trends. According to Wood, Rifkin was upset by the fact that Boyce Thompson had not obtained an environmental use permit (EPU) for the field test. Actually, the EPA
for Pest Control

decided that an EPU wasn't necessary, but New York state required that they get one. The EPU was easily obtained.

One important question that has been raised is, although the virus may not harm any sort of vertebrates, what about other non-pest insects such as honey bees and butterflies? "Well, we certainly are not going to go out and try to kill Monarch butterflies. We won't pick a virus that has a host range that includes those insects or honey bees," said Wood. "But there is going to be a small number of insects that are not pests that will be affected by the virus. It's the alternative that we're thinking about, though. The alternative is far worse."

The field tests this summer were done in an area that ensured that the virus would not spread. They took place on a two-acre plot of land with only the inner 1/4 acre being sprayed. "We also made sure that it was done on a calm day with little wind and with a backpack sprayer. They're more precise than other kinds," Wood said. Wood said that the chances of the virus spreading out of the designated area are minimal but even if it did, it would be so little that "absolutely nothing would happen."

On the three tests completed so far, the virus affected the insects about five days after spraying. It might have worked quicker on younger insects, but they wanted to use bugs that were larger in size. The virus works slower on older insects.

Wood said that the virus will also work not just from direct contact with it but with contact the insects have with those already infected. "The virus naturally turns the insect's insides to liquid and their outsides are so thin that it easily spills out," says Wood. "And if that liquid gets spread, the virus gets spread."

With the present success, there is much hope that it will help to develop environmentally safe pesticides. Wood said that that's what he's hoping his work will eventually lead to but that it will be a while before it happens. "I don't think enough people are bothered by chemical pesticides for any big changes to happen in the near future," Wood said. "There are trade-offs. We don't want chemicals on our food and yet we don't want worms in our apples or blemishes on our lettuce. It's definitely a case of the public indecisiveness. And right now the public is opting for the use of chemical pesticides. But developing safe pesticides will put a dent in it. It will reduce some of the need for chemical pesticides but it will never replace them entirely."

Wood hopes that the amount of chemical-free pesticides available will increase as the virus is developed and a way is found to work with an "ultimate gene" of the insect, this ultimate gene being one that controls the maturation process of insects. "If you can take out or mess with a gene that's involved with its process of development and upset its whole physiology at the wrong time, it would get so upset that it would stop eating, stop reproducing and eventually kill itself."

Wood believes that the whole concept of genetic engineering is fascinating but he feels that it is becoming more and more of a moral and ethical issue. "It's boundless," said Wood. "We're going to be able to do unbelievable things in the next fifty years with this technology. But it's like anything else, you have to be cautious about how you do it and instill some ethics in the situation. I don't see the work we're doing as that much different than modern medicine today. Except somehow it's already a moral and ethical issue."

Wood said that we can expect to see the product used commercially in about five years and that "hopefully in ten years, genetically engineered microbes can replace at least ten percent of the chemical pesticides now used in agriculture." But no matter how much non-chemical pesticides are developed, Wood realizes that they will never replace chemical ones. "We need those pesticides," said Wood. "We can't feed this country without them. And in the foreseeable future, we aren't going to eliminate them. We are always going to need them. The best we can hope for is to reduce the need."

by Christina M. Granados '90
IN 1979, ONLY 11 CASES OF AIDS were reported in the United States. Now, a decade later, over 110,000 Americans have been diagnosed with AIDS and the number is doubling every 17 months. The AIDS epidemic is perhaps the most crucial hallmark of the 1980s and, as an effective cure remains unknown, AIDS threatens to overshadow the 1990s as well. Without a cure, our only defense against AIDS is prevention. Locally, student volunteers, administrators and health educators at Cornell University are attempting to meet this need through increased campus awareness. By offering information, counseling and anonymous HIV antibody testing, Cornell's University Health Services is fighting a somber reminder of the 1980s.

AIDS, (Acquired Immune Deficiency Syndrome), is caused by the Human Immunodeficiency Virus, (HIV). The HIV virus infects a certain type of white blood cells called "helper T cells," critical to the body's immune system. As the immune system is attacked, the body becomes vulnerable to various unusual cancers and ordinarily harmless infections.

Perhaps the most serious aspect of HIV infection is that while symptoms may take several years to develop, the infected person can infect others immediately. "People can look and feel healthy and have no idea they are carrying the virus," said Janis Talbot, director of Cornell's Health Education Office. "A person may be attractive and look healthy, so why would his/her partner worry about AIDS?" The Center for Disease Control estimates that between five and ten million people have the HIV infection with no apparent symptoms, (as of August 1989).

According to Dr. Leslie Elkind, director of Cornell's University Health Services and chair of the AIDS Advisory Committee, many of today's students remain unsophisticated in their understanding of the illness. "They ignore it because they are not forced to deal with it," said Elkind. "The problem is that in the future they will have to face it and will not know how," he said.

In fall 1987, a group of Cornell administrators, faculty, staff and students responded to this lack of AIDS awareness by organizing the AIDS Advisory Committee and several AIDS education programs. To circulate basic facts, Cornell's AIDS Advisory Committee distributed an informational booklet to every member of the Cornell community in fall 1988. The committee is now redistributing these booklets with an updated fact sheet to all new Cornell students, faculty and staff.

Cornell's AIDS education efforts are also focused in clinical services offered at Gannett Health Center, said Talbot. A test for the presence of HIV antibodies guarantees anonymity by assigning code numbers, rather than names, to each test. Counseling is offered at Gannett during both the initial testing and the follow-up, when results are given. "The clinician will discuss information about AIDS, the dangers of a loss of confidentiality and the ramifications of the testing," said Elkind. Additional counseling, informational handouts and movies are also available at Gannett.

An equally important aspect of Cornell's AIDS program is peer education. Organized in fall 1987, SAFER, (Students for AIDS Facts, Education and Responsibility) works to spread facts, dispel common myths and offer guidelines for safer sex and communication between partners. The group of trained undergraduates offer SAFER workshops to any interested Cornell audience. "Sometimes growing up we get the feeling we are not supposed to talk about sex," said Talbot. "Now we are in a position that if we do not talk about sex with our partner we may die of AIDS," she said.

Coordinated by Health Educator Sharon Dittman, SAFER workshops range from "Get Smart: AIDS 101" to "Condom Sense" and "Smart Sex: How to Prevent AIDS and Other STD...and Enjoy Doing It!" "Our workshops concentrate on the basics of AIDS and the issues AIDS brings up," said Terri Rubinstein '90, assistant coordinator of SAFER. "AIDS manages to focus all of society's evils—racism, homophobia, classism—and bring them all together," she said.

Groups viewed as 'risk groups'—the poor, blacks and homosexuals—become objects of discrimination, said Rubinstein. "People tend to think of AIDS as a poor black person's or homosexual's problem rather than white middle-class America," said Rubinstein, "and that is not the case." Risk groups have become irrelevant, agreed Talbot. "It is all beginning to level off," she said, "and now everyone who uses risky behavior is at risk."

SAFER workshops also work to dispel myths about AIDS transmission. In one workshop, members of the audience stand in a tight circle, put their hands in the center and close their eyes. "Everyone grabs hands until they are all tangled up," said Rubinstein. "After getting untangled they learn that all this touching and untangling can be done just as safely with a person with AIDS."

Unfortunately, limited funds and manpower restrict what Cornell's AIDS education program can accomplish. "We are doing what we can," said Rubinstein. "Our goal is simply to get people to protect themselves as well as gain understanding and compassion toward people who do have AIDS or the HIV virus."
Winch Honored at Tree Dedication

A maple tree planted in front of Fernow Hall was dedicated in honor of Fred E. Winch Jr., professor emeritus of forestry, on Friday, October 6, 1989. The maple tree was presented to the College of Agriculture and Life Sciences by Winch’s children. Winch, who served on the faculty from 1943 until his retirement in 1975, was present during the ceremony in front of Fernow Hall.

Ag College Dean Serves as Task Force Director

David L. Call, Dean of the College of Agriculture and Life Sciences and Lucinda A. Noble, Cornell Cooperative Extension Director are serving on Governor Mario M. Cuomo’s statewide Task Force on Agricultural Employment, Education and Labor. Among the five task force working groups, Call chairs the group on training, development and recruitment and serves on working groups concerning the current state of agricultural employment in New York, and agriculture and education. Serving on the task force with Call and Noble are the commissioners of the departments of agriculture and markets, labor, economic development, education, health and social services, and the director of the Office of Rural Affairs.

Bloom Wins Poultry Award

Stephen E. Bloom, professor of cytogenetics, has received the Merck Award from the Poultry Science Association in recognition of his “outstanding and fundamental contributions in poultry avian sciences.” Bloom was cited for several research accomplishments, including his pioneering work in the use of chick embryos in assessing the biological effects of early exposure to environmental chemicals. He has been a faculty member of the Department of Poultry and Avian Sciences since 1968.

Alumni Honored at Annual Ceremony

Five graduates of the College of Agriculture and Life Sciences received Outstanding Alumni Awards Friday, October 6, 1989 at an awards banquet on campus. They were cited by the College Alumni Association for success in their businesses or professions, significant contributions to society and demonstrated leadership on behalf of the College. Recipients of the awards were: Wendell G. Earle ’48, PhD ’50 of Ithaca, Robert G. Greig ’36 of Red Hook, NY, Gilbert Levine ’49, PhD ’52 of Ithaca, Joseph D. Peck ’60 of Saratoga Springs, NY, and Edwin L. Slusarczyk ’49 of Utica, NY.

ALS Alumni Auditorium Dedication

A new 600-seat teaching auditorium on campus was dedicated on Saturday, October 7 during the “ALScapades ’89” reunion for alumni and friends of the College of Agriculture and Life Sciences. Named in honor of the College’s 50,000 alumni, the ALS Alumni Auditorium is part of the Academic I building, which will house administrative and academic offices of the ag college. Not only will the Academic I building’s new auditorium function as a lecture hall, but its proximity to a new 400-seat dining room will make it an ideal site for large meetings, conferences and alumni gatherings. David L. Call, dean of the College, described the auditorium as, “the largest, most modern lecture hall built on the ag campus in more than 50 years.” “It will greatly enhance the education of students of the College,” he said. Names of Builder-Sponsor donors who have made gifts ranging from $10,000 to $50,000 will be recognized on a plaque in the lobby of the auditorium. With each gift of $650, a name plate was attached to a seat bearing the name of the donor or a person or organization of the donor’s choosing.

Sisler Receives Prestigious Award

Daniel G. Sisler, the Liberty Hyde Bailey Professor of Agricultural Economics, has received the Service to American/World Agriculture Award from the National Association of County Agriculture Agents. Sisler “has spent most of his professional career in serving the needs of U.S. and world agriculture,” the citation reads. “He is a master teacher of undergraduates, an acclaimed graduate adviser of foreign and domestic students, author of important contributions to the literature of international trade and agricultural policy, and a widely sought speaker on world food problems, processes of international agricultural development and public policy issues.” A member of the faculty in the College of Agriculture and Life Sciences since 1960, Sisler has focused his research on domestic agricultural policy, the role of agriculture in economic development and food production problems in developing countries.
EVER WONDER WHAT HAPPENED to the graduates of '79? It has been ten years since they graduated, enough time to get out into the "real world" and settle into life.

Michael Gardinier has done just that. The passage of a decade gives him the opportunity to reflect on his years at Cornell and how he benefitted from them socially, academically and professionally.

Gardinier transferred to Cornell after spending his freshman and sophomore years at SUNY Morrisville. He explained the transfer to Cornell as a stepping arrangement in his life that was both unexpected and enjoyed.

"I sweated a lot to get from the farm to a two year school as a comfortable step. From there the transition to Cornell was challenging. I think I adjusted to being away at school halfway during my two years at Morrisville and during my first semester at Cornell I adjusted the rest of the way. Because I was a transfer, I had to do a lot of packed and challenging work. At first I practically lived at Mann Library, a place where you can hide and concentrate. The second place I spent time was the Thirsty Bear (a bar), but not every night," said Gardinier. He explained that his friends in the Clara Dickson Living and Learning Center helped his adjustment from the small town and small school life he was used to. Gardinier enjoyed both the learning and interacting with people that occurred in the dorm.

"Our floor was a tight group of people. We were a mix of students, not all in the agriculture field, and it made up and interesting group. Also, we were all trying to accomplish the same thing," said Gardinier.

"The skills of sciences and classroom learning from Cornell were one aspect of my education but the communicating with people and large numbers of people, that I learned at Cornell helped the most in my field. Some things I learned years ago are outdated but learning how to keep living and dealing with different people is the best thing I got out of Cornell," said Gardinier. He communicates with 300 to 400 growers, operators and individuals in his position as Agriculture Manager of Seneca Foods Corporation.

"I got the job at Seneca Foods right out of college, but I had recruiting offers from other places, too. Working with fruit and vegetables was not first in my eyes, but Seneca caught and kept my interest," said Gardinier, who majored in agronomy. He works with the area growers and oversees the production and delivery of products to Seneca.

"I deal with planting, harvesting and all aspects of production from recommending soil type and fertilization practices to dealing with weed and insect problems," said Gardinier. "I also work closely with the rest of our agricultural staff in planning and implementing our daily procurement responsibilities. We cover all areas of production from start to finish." He explained that the fruit and vegetable processing company of Seneca Foods contracts with local growers in the spring, schedules their harvests and purchases the raw products for their own use.

"If I had a chance to take more classes, I would take accounting, business administration, and communication. I can keep up with the new technology in my present field. Additional classes help you understand how businesses work. And Ithaca is a beautiful place to go to school when it does not rain," said Gardinier.
About the Issue

Cornell University has established itself as one of the world's most famous research institutions. This issue of the Countryman focuses on the research conducted by the College of Agriculture and Life Sciences. In areas as diverse as integrated pest management and metacognition, the college's professors and researchers are finding answers and solutions to some of society's most puzzling questions. Get the update on fascinating research progress in this issue of the Countryman.

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It is the policy of Cornell University to actively support equality of educational and employment opportunity. No person shall be denied admission to or participation in, or be denied employment on the basis of, any University program or activity, or be denied the benefits of, or be denied participation in, any of its programs and activities, on the grounds of race, color, creed, sex, age, marital status, national or ethnic origin, handicap, or handicap. The University is committed to the maintenance of affirmative action programs which will assure the continuation of such equality of opportunity.
A NEW PROJECT IS UNDER WAY FOR farmers. It's called the Northeast Organic and Sustainable Farmers Network and its primary objective is to provide northeast farmers with information concerning organic and low-input farming strategies.

Low-input refers to farming that liberates the farmer from dependence on purchased inputs such as manufactured chemical pesticides and fertilizers. Crop rotation is only one practice in which sustainable agriculturalists engage.

Other methods include soil-conserving tillage methods, natural/biological pest control techniques and the use of organic fertilizers such as legumes and composted manures, said Judy Green, the coordinator of the project. She is an extension support specialist with the Farming Alternatives Project in the College of Agriculture and Life Sciences at Cornell University.

The project has been funded by a two-year, $115,000 grant from the federal, USDA Low-Input Sustainable Agriculture (LISA) program, and is a collaborative effort involving the Natural Organic Farmers Association (NOFA), the Maine Organic Farmers and Gardeners Association and Cooperative Extension systems in Maine, New Hampshire, New Jersey, New York, Vermont, Massachusetts, Connecticut and Rhode Island.

"More and more," Green said, "conventional farmers are feeling the need to change their production methods. Farmers are recognizing not only the possible market benefits of organic and low-input farming, but also the potentially deleterious effects of toxic chemicals on human health and the environment."

The new project is aimed at making organic and low-input farming information available to interested farmers and extension agents.

Green said that one specific goal of the network is to produce a series of manuals on organic and low-input farming practices. The manuals, Green explained, will not be a haphazard compilation of data. "We'll be interviewing farmers who are having success with organic and low-input farming and their claims will be research-backed. We'll also be studying documents submitted by certified organic farmers so we can actually see which methods are and are not working."

Another integral part of the project is an in-service program for extension agents and other agricultural professionals. Liz Henderson, who initiated the project, and who is herself a certified organic farmer in Rose, New York, said "The Cooperative Extension specialists are supposed to be there for the farmers. But if a farmer were to call up and ask how to do something without chemicals, I don't think he'd get much help. We're trying to help agents fill that information gap." Topics include principles of sustainability, pest management and guidelines for organic production of all food commodities.

Another important part of the project is the concept of the "field day." Six on-farm field days have already taken place throughout New York state, during the summer of 1989. These field days feature demonstrations and discussions by experienced organic growers. Such open houses, Green said, provide an opportunity for farmers with low-input knowledge to share information with extension agents and researchers.

Green said that fifteen similar field days will be sponsored next summer in the eight participating states. "These

By Michele Pepe '91

On August 7, 1989, John Gorzynski hosted a field day on his 12-acre farm in Cochecton Center, New York. Fourth from the right is Elizabeth Henderson, NOFA farmer who initiated the Northeast Organic and Sustainable Farmers Network project.
IN 1868, THREE YEARS AFTER CORNELL was established and the year of its inauguration, coeducation existed in many schools in the nation on a collegiate level. The idea already abroad was welcome in the minds of Ezra Cornell and Andrew D. White, the co-founders of Cornell University.

Ezra Cornell proposed that his university should be open to women. His feelings on the subject can be found in a letter he wrote to his granddaughter Eunice Cornell, dated February 17, 1867. He wrote, "I want to have girls educated in the university, as well as boys, so that they may have the same opportunity to become wise and useful to society that boys have."

Andrew D. White shared the same notion. In his 1862 proposal for a dream university, he wrote that it should be open to women. After a journey of inspection to various coeducational institutions in the nation in 1871, he wrote, "A woman's want of appreciation of Art in its nobler phases, their fear of new truths, their bolstering of fetishisms and superstitions, their dire ful, though indirect, influence on politics were such faults that could be corrected by higher education."

Following in the footsteps of Jennie Spencer, the first woman to present Cornell with a certificate of a state scholarship to attend classes, was Gertrude Mathewson, "Gert", "Gertie Gloom", "Trudie". Mathewson, almost 50 years later. Spencer never finished an education at Cornell. The harsh Ithaca winter defeated her valiant attempts. Because no lodging was available on campus, she was forced to live at the bottom of the hill and to climb it two or three times a day. Eventually it became too much.

It was because of Spencer's unfortunate circumstances and not her ability to learn, that Henry William Sage eventually built Sage College, an all women's dormitory. His donations were on the condition that, "Instruction shall be offered to young women by Cornell University as broad and as thorough as that now afforded to young men."

Mathewson came to Cornell in 1919, and received her degree from the New York State College of Agriculture. Her life at Cornell, as a student and a woman, is documented in the pages of her scrapbook, which after she added to it for four years, is over a foot deep. Its black pages, held together by a long, brown shoelace under a red cover with the Cornell seal, are filled with souvenirs, mementos and her thoughts. She donated it to Cornell in 1980, and it is stored by The Department of Manuscripts and University Archives in Olin Library.

When Mathewson was at Cornell, scrapbooks were kept for fun by both men and women. Often referred to as "stunt books," they served to catalogue memories as a gesture for the future. Mathewson's book is filled with "something to save" mementos that gathered her memories of Cornell together, for when she would take the book out years later in moments of reminiscing.

Her pages are thus filled with photographs of friends, letters from roommates and Western Union telegrams from home. There are numerous music programs from concerts held in Bailey Hall and athletic programs for football games on Schoellkopf Field. She seemed to save every ticket stub from nearly every event she attended.

She kept report cards, newspaper clippings of campus and national events and her own writings published in the Cornell Daily Sun. Surprisingly intact are the invitations and dance cards with pencils attached, once used to write down dancing partners, and the name cards from various sorority events and other social functions.

Mathewson also saved things most people would not think to put in a scrapbook, like candles from birthday cakes, locks of someone else's hair, cigarette butts and a Cracker Jack box ring.

To really help her remember, years later, the traditions and customs of Cornell, pasted on the front page of her book are her freshman handbook and Cornell song book. To remember what it was like to be a woman at Cornell, she also kept the book of rules for the Self-Government Association of the Women of Cornell University.

It is this book of rules, and the freshman hand book that make all the mementos Mathewson saved more illuminating of the life she lived at Cornell and what it was to be a Cornell woman.

As a freshman, she was congratulated...
REVEAL

in her handbook, by then University President Jacob Gould Schurman, on the precious privilege now open to her in attending Cornell University. "The most beautifully located University in America, with the largest campus and the greatest number of buildings devoted to higher education." She was also told in Schurman's introduction that "The aim and object of all students is to study. . . . This is a place for hard work and it is also a school of character. These things—character and education—are the most important in the world."

These are personally challenging and intimidating words to hear before you even get started. But flipping the pages of the handbook, there appears a title called "Social Life." What Mathewson read under this title might have alleviated some of the fear instilled in the introduction. It reads, "Study is the primary purpose for which he has come to the university . . . acquaintance with other students, both co-eds and men, fills an important place in college life. . . . during the week many dances, entertainments and socials are held . . . "busting" is the penalty which has over taken a great number of students who have had an excess of social life during the term."

Her stunt book reveals that Mathewson had both a rewarding academic and social life. She was a member of Kappa Kappa Gamma sorority, the Mortar Board Honor Society, rowed, and served as the assistant women's editor and eventually the women's editor of the Cornell Daily Sun. She participated in many club activities and functions: the Freshman Banquet Committee, the All Dance Committee, Home Economics Advisory Council and the Women's Self Government Association, which all women were ipso facto. She did all of this in her four years at Cornell.

She was warned before hand, but at one point, as most freshman have been throughout the history of Cornell, she was fearful of busting. On one page of her book, she wrote "Hurrah! I'm not going to bust" and pasted it next to the note card which told her she had earned a C.

Each page is marked with mementos that meant something to Mathewson. There is the page with the picture of her sorority sisters and one that shows her rowing. On another is a picture of "John" and one that has been scribbled, "Danced with Guel, I'll never be the same." A few pages mark her inauguration in the national honor society with ribbons and invitations and the last pages of her book are dedicated to her graduation from Cornell in 1923.

All that Mathewson saved reflects what the handbook also said about one who attends Cornell. [Success] "lies in individual effort and hard work. . . . The opportunities for both scholastic and social success are many. What you will make of them depends entirely upon yourself."

It seems that Mathewson read those words and believed them. It is evident through what is included in her scrapbook and knowledge of the times, that she did succeed. She survived the curfews set only for women, the jeering of the men who were not all in favor of coeducation, the standards set for a woman's proper behavior and the restrictions for admittance into clubs and affairs open only to men, all the while trying to remember her feminine charms. The Cornell she knew, although changed with time, seemed to still resemble the atmosphere of 1874 when a Cornellian wrote, "Cornell must be a good place for a girl to get an education; it has all the advantages of a university and a convent combined."

Obviously she made the best of what she did have and was allowed to do. She could be proud of herself for showing that a woman could absorb an education as well as a man. Cornell women of today should look back with respect on the history of these women of an earlier Cornell.

Mathewson probably did not think she was creating such a complete history of her life at Cornell and of Cornell itself when she sat and pasted mementos. Nor did she probably ever think that someone was going to take a picture taken of her when she attended Cornell, would chuckle. Not at her, but at the hairstyle and dress, so unique to the time but out of date with the passing of it.

There is a lesson to be learned from the keeping of a scrapbook. It is a permanent record of a once-lived time where one might find pleasure, insight or self recognition from involvement with the unfamiliar. But to do so, you have to turn the pages very slowly, look carefully and think. Only then can you learn something.

It is good to see now, the footsteps that Gertrude Mathewson created long ago at Cornell and to compare them to today, and to do so just by turning a page. It only makes one more thankful and appreciative to realize what women once did and did not have at Cornell. For all Cornellians, it can also make you proud of your own footsteps made through the years and as a Cornellian of today. ■

by Sara J. Frank '90
“WHERE AM I?” YOU ASK WHEN you find yourself in unfamiliar surroundings. To find your way home, you just reach for a map and a compass or refer to a mental image of your path.

But what about animals? Scientists have long questioned the amazing treks of animals that journey hundreds of miles from their homes. Without maps or compasses, how do they return?

“This is a very old, complicated problem that has puzzled people for years,” said Charles Walcott, Director of the Cornell Laboratory of Ornithology. Walcott represents one of many scientists who have studied the behavior of homing pigeons to get to the bottom of this phenomenon.

“All animals display orientation instincts,” said Walcott. “We see evidence of it in the flight of the monarch butterfly, the movement of salmon and whales and the migration of birds. But it’s difficult to experiment with larger animals, such as whales, because of their size and their territorial range. Carrier pigeons, however, are easy to keep track of. They are a convenient model for this phenomenon.”

Scientists at Cornell have studied the homing instincts of carrier pigeons since the 1960s, with monies provided by the National Science Foundation. Studies by the late William Keeton, a Cornell scientist, concentrated on the effects of the sun on the birds’ flight and how they found their way under overcast skies. Walcott joined Keeton’s research project in 1981, after Keeton’s unexpected death.

Keeton’s continued research has shown that several factors, in addition to the presence of sunlight, determine the pigeon’s flight patterns. “If the sun is not available, the birds may use multiple alternative cues,” Walcott said.

One of these cues may be magnetic fields. Some scientists hypothesize that small deposits of magnetite in the pigeons’ heads help them sense regular changes in the earth’s magnetic fields. Local magnetic field gradients may help the birds to determine their current position relative to their home position. Thus, the magnetite deposits serve as inborn compasses.

“I’m quite confident about the presence of magnetite in the birds’ heads,” Walcott said, “but there is no direct proof as to whether the birds use it to detect the presence of magnetic fields.” To obtain evidence, Walcott conducts experiments on pigeons housed in two separate lofts in Lincoln, Massachusetts.

“In one loft, the birds are disoriented by magnetic anomalies in the area of the loft,” he said. “In the second loft, these disturbances are not present.” Walcott then follows the birds by plane, studying their flight patterns as they journey to their destination and then return to the loft.

“Those birds disturbed by magnetic anomalies fly back and forth in circles, until they get out of the anomaly. Also, there is no agreement among these birds as to where home lies,” he said. “However, they show no difference in homing abilities when compared to birds in the other loft.”
Odors may also help the birds find their way home. The Italian scientist Floriano Papi postulated that carrier pigeons remember the location of their lofts by remembering scents dominant in the loft area. In addition, the birds discover odors travelling on the winds from outlying areas and associate these scents with the direction from which they came. In this way, scents lead the birds to their lofts.

Walcott goes on to explain an experiment conducted in Frankfort, Germany in which the presence or lack of odor in the environment revealed clues about the birds' homing abilities. "Pigeons raised at ground level were deprived of olfactory information because they were not exposed to wind," he said. "When released, these birds flew home."

However, birds raised four stories up paid attention to olfactory cues. "These birds displayed different flight behavior than those deprived of odor cues," he said.

Walcott has conducted a similar experiment, comparing the flight behavior of birds raised on Jersey Hill, a site about 80 miles west of Ithaca, and birds raised at Cornell. This experiment supported his hypothesis that pigeons raised in different environments respond to different sets of cues. "A person raised in New York City might use the streets, skyscrapers or subways as landmarks to find their way," he said. "But a native of Manhattan, Kansas may have to use different cues. It's the same way for pigeons."

Although financial difficulties have hindered Walcott's efforts, he plans to continue these types of experiments. "The National Science Foundation greatly reduced funding for Cornell's carrier pigeon research last spring," he said. "Only eight percent of the applications for research grants for animal behavior research funded by the NSF were renewed last year."

Thus, the program has suffered dramatic cuts in staff and resources. "Normally, we have 1500 birds," Walcott said, "but we are currently down to 600." The decrease in loft population also meant a reduction in the number of people to care for them. "In the past, we've had a loft manager who tends the birds, a research technician and additional help from six to eight undergraduates," he said. "Now, there's just me."

In spite of these setbacks, Walcott is still dedicated to his research. "I don't know if we'll ever have an answer to this question," he said, referring to the birds' homing instincts. Until then, Walcott will pursue his research, while we continue to scratch our heads at the birds' mysterious ability to find their way home.

by Kristen M. Miller '91
When a new course is proposed for the College of Agriculture and Life Sciences, who approves it? When a student petitions to drop a class after the deadline, who tries the case? And what about reviewing admissions policies or the College’s financial aid program?

But the most important question here is, who really is responsible for such decisions? Are the administrators or faculty responsible? Do students have any part?

The answer is that they all do. The College of Agriculture and Life Sciences has nine special committees designed to continually evaluate the growing needs of the College and make recommendations for appropriate changes. Committee members include representatives from all areas of the College, including administrators, faculty and students.

The nine committees are: (1) Academic Achievement and Petitions; (2) Academic Integrity Board; (3) Admissions Committee; (4) Curriculum Committee; (5) Mann Library Committee; (6) Policy Committee; (7) Financial Aid and Scholarship Committee; (8) Study Abroad Committee and (9) Support of Teaching Committee.

Each committee serves to meet the needs of a particular aspect of the College’s structure. For example, the Admissions Committee deals with matters concerning policies and practices of admissions procedures. Similarly, the Financial Aid and Scholarship Committee reviews the policies dealing with financial aid awarded to students by the College. These two committees are responsible for evaluating current policies and can make recommendations for potential changes. They do not, however, review individual applications or specific cases.

It is the job of the Academic Integrity Board to review individual cases concerning academic integrity or violations of the integrity codes set forth by the College and the University. This committee has the largest number of student representatives to ensure that there will be at least two students available at any given time to hear an individual case. The larger selection also allows students with conflicts of interest in a particular case to withdraw from hearing that case and allow another member of the committee to participate instead.

The Academic Achievement and Petitions Committee also deals with individual cases concerning petitions submitted from students. The committee meets once a week to evaluate the petitions and review current policies on adding/dropping a course, low grades, leaves of absence and other student problems.

According to Elizabeth Oltenacu, Associate Director of Academic Programs in the College, “The Policy committee is the umbrella committee that interacts with all of the other committees. This is because if one committee decides to recommend a change in policy, this
change must also be reviewed by the policy committee to ensure that the change is in accordance with the goals of the College.

It must then be approved by the College faculty before the change can be enacted, she said. "The policy committee must look at issues that are wider than single committee issues," said Oltenacu. "This committee currently has three student members.

The curriculum committee also involves a great deal of work. This committee is responsible for all of the curriculum matters in the College, including course additions, distribution and graduation requirements and scheduling. "For this committee you want the kinds of students who are not afraid to voice their opinions," said Oltenacu. "There is a lot of give and take when new courses are proposed and it is vital to have input from all possible angles," she said.

The Support of Teaching Committee is a recent addition to the list of student/faculty committees. The purpose of this group is to serve as a liaison between the Office of Academic Programs and other university teaching support programs. Its primary purpose is to maintain communication with faculty and to support the enhancement of teaching. Individuals from all levels of the College, including students, faculty, graduate students and administrators are involved in this committee.

One benefit of the committee is the training program that they have established for graduate teaching assistants in the College. According to Oltenacu, a workshop was held this fall for graduate teaching assistants that was coordinated by the members of the Support of Teaching Committee. Since the workshop was such a success, the committee plans to continue to offer these workshops each semester.

So how does one get involved with these committees? Students are recruited each fall during pre-registration by the College's Ag Council. The Council, which is comprised of student members, along with representatives from the Office of Academic Programs, interviews and selects the most qualified candidates to serve a one-year term on a particular committee. The number of students on the committee ranges from one to six. This number varies according to the specific needs and functions of the group.

Until recently, the one-year term served was from fall to spring but has been changed so that it begins in the spring and terminates in the fall. Oltenacu said the change was necessary because when the term began in the fall, students were not selected until mid-semester, leaving about half of the fall semester with little or no committee input from student members.

The terms for faculty members are not only longer, but are also staggered to maintain continuity. Faculty members are elected by a ballot vote that is distributed to all faculty members in the College. In the case of the Curriculum Committee, however, a representative is needed from each department.

Accordingly, these representatives are recommended by each department in the College rather than elected by all faculty members. Therefore, this committee has the greatest number of faculty representatives. Most of the other committees have four or five faculty members each that serve terms of two to three years.

The reason for staggering the faculty terms is to try to maintain some kind of continuity within the committees from year to year. This way, there is not a completely new transition every time new faculty or students are elected. "If you have this type of overlap, you don't end up going in circles," said Oltenacu.

The Office of Academic Programs also maintains records of committee reports from past years to avoid similar overlaps. Each committee has a chairman, a faculty member responsible for scheduling and leading meetings, keeping records of decisions made and maintaining contact with the Office of Academic Programs as well as the other committees. The chairman is also responsible for making annual reports to the faculty of the College at monthly meetings.

"The faculty does want to know what is happening in each of the committees," said Oltenacu. Therefore, the faculty meetings are a perfect opportunity to share the progress of each committee and there is always time set aside for faculty, employees and students to discuss important issues and problems.

The students, faculty and administration all seem to be pleased with the progress of the student/faculty committees. They are a great opportunity for students to get involved in the affairs of the College, interact with faculty and administrators and help to make decisions that can directly affect the changing needs of the College, the University and the student body.
A SCIENTIFIC COMMUNICATOR

by Beth Nielsen '90

IN GLANCING AROUND COMMUNICATION Professor Toni Wilkinson's office, you would never guess she was a scientist. Instead of molecular models, exotic plants and microscopes decorating her desk and office shelves, book cases brimming with writing manuals line the walls. Wilkinson's office does a good job of keeping her scientific interests quiet and hidden from the average passerby, but a face-to-face talk with this woman reveals a scientist, a writer and a communication professor all in one.

A New York City native and a graduate of Hunter College, Wilkinson came to Cornell in 1940 seeking her biology PhD in comparative morphology which she earned five years later. She knew her degree was valuable and highly respected, but not enough to land her a teaching position at Cornell.

"When I received my PhD, I knew I could get a job at a first rate women's college or small co-ed university, but I never thought about teaching at an institution such as Cornell. Cornell has always trained women, but until recently, only hired them as home economics professors," explained Wilkinson. However during the war, Wilkinson was fortunate enough to offer a professorial position in the Department of Floriculture where she instructed for several years.

But, following her return from starting a family, Wilkinson found that the scientific literature and findings she once knew so well had advanced and grown during her time away from the University. "Any woman in science who thinks you can take time out for children and pick up where you left off had better think again," she said. Since Wilkinson found herself far behind the scientific research and Cornell still was not hiring female professors on a regular basis, she was faced with two alternatives, either find a position editing publications or become a laboratory technician in one of the departments. Wilkinson wanted very much to remain in Ithaca since her husband had taken a position at Cornell.

Fortunately, Wilkinson's degree opened doors in the field of technical editing. In 1958, she became research editor in the Department of Electrical Engineering and took a position as editor and freelancer for the Administrative Science Quarterly, a publication of the Johnson Graduate School of Business Management. Later, Wilkinson edited Hortus Third, a dictionary of cultivated plants. "Because of my biological science background I could edit in the biological sciences, and because of my other scientific knowledge I could edit in the physical and social sciences," she said. Thus, Wilkinson's previous writing and editorial positions along with her scientific background resulted in her employment in a position that would increase her technical editing experience.

Wilkinson began teaching science writing in the Department of Communication in 1976. "I was lucky because this position was a way of using my scientific background and my editing skills," said Wilkinson. She attributes her success in teaching and technical writing to her specialized training. "With my biological science, physical and social science background, and with my technical editing and writing skills, few others on campus presently have the same qualifications," said Wilkinson.

At present, Wilkinson teaches three communication courses at Cornell: Organizational Writing, Writing in the Sciences and Engineering and Scientific Writing for Scientists. All three classes are small enough to provide a great deal of professor-student contact, a philosophy that Wilkinson teaches by. "Professor Wilkinson is so personable and is always eager to help you both inside and outside of class," said Cynthia Jensen, a student enrolled in Scientific Writing for Scientists who is currently pursuing her PhD in ecology and systems. "She told us from day one that we could call her house anytime if we had problems with our assignments."

Jensen is taking Wilkinson's course because she thought it would prove beneficial, and it has. "All the material I've learned in class I am using right now in writing my thesis, in fact, most of the assignments I've submitted are portions of my thesis," explained Jensen. The class structure consists of weekly exercises in which students work on professional writing such as thesis chapters, scientific journal articles, letters of recommendation and the like. "It amazes me how Professor Wilkinson can edit any type of scientific information, is able to edit all weekly assignments word for word and can still be prepared for class," said Jensen.

Wilkinson enjoys instructing all three of her writing classes and said she finds lecturing much easier than teaching. But, she is especially fond of instructing students in organizing their writing. "It's [organizing] a very difficult thing to teach, but I really like it and I'm good at doing it," said Wilkinson. "I love helping students to shape their writing so that it makes sense in a clear, concise way."

Professor Wilkinson's desire for clear, concise scientific writing has led her in many different directions, one of which took her to Prentice-Hall publishers. In 1981 she was sent a complimentary copy of "such a badly written science writing book" that it gave her incentive to write her own. After five years of work, her book is nearly complete and will appear on bookstore shelves in July 1990. "The book is essentially a bringing together of everything I've ever learned in my working career," explained Wilkinson who added that the biggest challenge in writing the piece was finding time to do it.

Thoughts of retirement have loomed in Professor Wilkinson's mind lately, as her June 1990 retirement nears. Until recently though she hasn't had time to think about her life after Cornell. "I have a lot of back work to do at home and I would like to do some sculpture in my free time," said Wilkinson. "But, I will miss the exchange with students very much."
NORM SCOTT: Research Leader

NORM R. SCOTT PHD '62 PLAYED AN important role in the field of agricultural engineering. He once led efforts aimed at discovering the effects thermal environments have on certain farm animals. He was a professor in the College of Agriculture and Life Sciences. And he formerly studied the intricacies of the estrus cycle in cows. In short, Scott counts himself among the hundreds of agricultural research scientists conducting his work at Cornell, one of the nation's foremost research institutions.

No longer, however, is that true. These days, if you want to find Scott, do not look in a classroom or in one of Cornell's innumerable research laboratories. Look for him on the third floor of Day Hall, just a few doors down from University President Frank H.T. Rhodes. Scott was named Cornell's new Vice President for Research and Advanced Studies in July 1989. He is now the top administrator in Cornell's $270 million a year research efforts.

"It's been very interesting," Scott recently said of his new job. "You get a chance to work in a lot of different areas. One day, you'll be looking at global climate, the next day, it'll be biotechnology. And the next, you'll be talking about how you can enhance research interactions with industry. There's really a wide breadth of topics you deal with."

On the face of it, Scott's job as vice president for research seems completely different than his former position as a researcher. But, as he points out, there are similarities, and it was no accident that a former researcher wound up in the post. Even in his administrative post, Scott speaks of academic freedom, something usually only associated with professors. And Scott's knowledge of the research process is crucial in understanding research problems that others face.

"It's the kind of job where you sort of make it what you will. You decide more what you're going to do. You try to look at opportunities and try to bring people together to pursue things if they're interested," Scott said. "There is no day-to-day job description. I handle the job differently than (my predecessor) Joe Ballantyne. He handled it differently than Bob Barker, and he handled it differently than Don Cooke."

That is not to say, however, that Scott is handling his job without any rhyme or reason. As soon as he was appointed to the vice-presidential post in July, he (along with deputy vice-president for research John Wiesenfeld) mapped out a 15-point agenda, ranging across four general categories.

In the first category, institutional issues, Scott and his staff will look at things such as cost, strategic research planning, relationships with New York state and public concerns. Other general areas of concern include outreach and technological transfer, communication, and new initiatives. "We're trying to make impact across all four of these areas," Scott said.

With the kind of money Cornell has dedicated to research, there is no reason why Scott should not be able to make an impact in areas such as global climate, social sciences research and continuing education. Second only to Stanford in dollars expended on research, some $270 million will be spent on research at Cornell during 1990. Breaking that down, 46 percent will be spent in endowed school research, 35 percent in statutory research and the remaining 19 percent on medical research. As for where the money will come from, 60 percent will come from the federal government, 77 percent of which will be from the National Institutes of Health and the National Science Foundation.

That is a long way from Scott's doctoral work in agricultural engineering. Scott was raised on a farm in Washington and got his start in the field of agricultural engineering as an undergraduate at Washington State in the late 1950s, earning his degree in 1958. After that, he began his graduate work at Cornell, where he has remained. He earned his PhD in agricultural engineering in 1962, and immediately became a faculty member in the department.

Between 1978 and 1984, he served as department chairman. From 1984 to 1989, he was the College of Agriculture and Life Sciences's Director for Research and Director of the Cornell University Agricultural Experiment Station.

According to Scott, the most difficult change in jobs that he had to make was not this July when he left the ag college, but in 1984, when his involvement in day-to-day research came to a halt.

"It was more traumatic moving from chair to leader of research for the College of Agriculture and Life Sciences than it was moving from that job to Vice President," Scott said. "The big change was moving to where I wasn't as personally involved in research activities."

Chances are, however, that Scott will always be involved in research—in one way or another. 

by Mark Styczynski '91
DID YOU EVER SIT BACK AND THINK about something you have done? Everyone does. You analyzed the situation, the choices you made, the resulting consequences and sometimes mentally reviewed the situation while picturing different decisions and outcomes.

However, have you ever actually thought about the way you think? Not that you think better when sitting in your bedroom with a favorite pillow and an old Beatles record playing, but your real thinking procedures. The self-reflective awareness of thinking processes deals with how an individual thinks about the ways he or she thinks about making decisions. The entire concept, known as metacognition, is very abstract.

Professor Dawn Schrader, from the Department of Education in the College of Agriculture and Life Sciences, is currently running a study of metacognitive processes that students use in making decisions.

There are two major aspects of this study. One is to find out how metacognition is applied to social decisions and personal values. The other part focuses on how people make sense of abstract moral dilemmas and how that compares to the way they think about moral conflicts they face in their own lives. Moral dilemmas are problems such as "is stealing medication acceptable if it saves a person's life?"

It is the reasons behind the answers, specifically the "why" and "how" dimensions of the thinking processes, that Schrader is interested in. She also studies the way people represent and coordinate thought systems within themselves in addition to their personal learning styles. This is a further abstraction of moral thinking processes than most psychologists have dealt with. Schrader's research is grounded in the theories of moral development and higher order cognition of psychologists such as Piaget, Kohlberg, Flavell and Brown.

One facet of Schrader's research involves a Metacognitive Awareness Interview. In it, the subject is read a hypothetical dilemma and asked "If you were going to teach me how to answer this hypothetical dilemma, what would you say?"

"If the subjects can tell me how to do something, it implies that they know how to articulate the processes in question and that they are aware of these processes," said Schrader. "I follow up on how they know how to think that way. This keys into their level of complexity."

There are five metacognitive levels that Schrader has developed from previous studies involving subjects from the ages of 16 to 38. The first step, Non-Reflective Metacognition, is where the individual only reflects on the context of their thoughts. Next is Self Reflective Monitoring, where the person knows that they are thinking about their thinking but does not realize how.

When the individual understands the procedures they are using in the process of metacognition they have reached the third stage, Identification of Processes. Explanation of Processes evolves when the subjects can describe these processes. The final step is Evaluation of the Processes. At this point an individual is able to step outside of their mind to examine and evaluate their thinking processes.

There is no data supporting a higher level, but Schrader believes that people might experience a sixth part. Here people may have the ability to change the way they think about their thinking processes, modifying them for improvement.

Schrader's research at Cornell concentrates on these ranges of metacognitive processes, specifically in the undergraduate years. She is trying to pinpoint where the development of these levels starts and ends. Plans on starting the next phase of the study, in the spring of 1990, include questioning freshmen and following their development of metacognitive processes throughout their four years at Cornell.

"There is a change over time. People become more aware, more complex, and more able to incorporate their ideas and moral considerations in their decision strategies," said Schrader. There is a question, however, to see if the change in processes is developmentally different or hierarchically related.
The second major part of the study concentrates on values and how they influence social decisions and actions. Students fill out a Values Priority Inventory that is based on the underlying notion that moral development in humans moves toward certain universal principles, overcoming the "individualistic and rule-oriented perspectives" to reach a higher, "prior to society" perspective, that is, to understand the moral values which underlie systems of laws.

Individuals taking the inventory list and rank values and priorities for both personal and societal scales and are asked to explain their choices. Schrader examines why students pick certain values and why they put those values in specific orders. "The 'why' questions have not been addressed before in other values inventories," said Schrader. She also explained that the data compiled from the pilot study showed that students chose the same top three values for both the personal and societal morality scale: love/care, justice and mutual respect, but ranked different orders for the values between scales. Schrader is interested in why this difference exists.

Schrader's next step is to compare the Values Priority Inventory with the Metacognitive Awareness Interview from the first part of the study. This combines the individual's data so she can draw inferences about perspectives, moral values, changes over time and reasons why change does or does not occur. "To be more active in influencing students' lives we need to have a sense of what is important to them and find out how we can integrate this into their courses," said Schrader.

"If people can take conscious control of their value and priority conceptions, they are then empowered to act more consistently," said Schrader. She also explained that conscious awareness of values and moral issues creates the ability for individuals to construct a better, more complex way of thinking and a more encompassing sense of morality.

by Teri B. Kestenbaum '91

Values Priorities Inventory

HOW IMPORTANT ARE THE FOLLOWING ACTIONS FOR YOU?
Please rank them according to the scale below:

1=Very Important  3=Somewhat Important
2=Important        4=Not Important

1. Helping a friend in need
2. Helping a family member when in need
3. Helping a neighbor in need
4. Helping a stranger in need

Which of the above (1-4) is MOST important?_______

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by Laura M. Glazier ’90

"I APPLIED TO CORNELL FOR UN-
dergraduate school but I was rejected," Dr. Thomas Eisner said as he pointed to the rejection letter framed on his office wall. "I get a good laugh about it now," the professor continued.

Rejection, however, has not been a common occurrence in the life of Thomas Eisner. The Cornell biologist was the first American to win West Germany's Karl Ritter von Frisch-Medaille, the highest award of the German Zoological Society. Winning the award came as a complete surprise to him. "One day I got a phone call from Germany and I was told that I had won the award—it hit me like a bolt of lightning," Eisner said.

The biologist won the award based on his achievements in developing the field of chemical ecology. As an added bonus, the German-born Eisner was able to give his acceptance speech in German when he received the award on May 25, 1988 in Bielefeld.

After living a good portion of his life in South America, Eisner decided to come to the United States to study. He attended Champlain College in Plattsburgh, New York and then transferred to Harvard University where he majored in chemistry and pre-med.

While in college, Eisner happened to take a course on insects and decided there was nothing else for him. "I thought my insect interest was just a hobby, I didn't realize I could base a career on it," Eisner said. He continued his education and received a PhD in biology from Harvard in 1955.

Eisner has been a member of the Cornell faculty since 1957 and is the Jacob Gould Schurman Professor of Biology in the Section of Neurobiology and Behavior. He has currently out-lined a plan for his most immediate project, chemical prospecting.

Chemical prospecting involves searching nature for undiscovered medicines, food chemicals and other compounds. This project would not only provide new chemicals for the world but would help the economies of Third World countries where many new chemicals are likely to be found. The Third World countries would receive profits from the eventual commercialization of the new chemicals. Eisner has been working with Cornell organic chemist Jerrold Meinwald on this project. Eisner and Meinwald have a long history; they have been collaborating on experiments for 30 years here at Cornell.

The search for new chemicals would take place where the greatest variety of plants, animals and natural chemicals is found, in tropical areas. These same areas are experiencing the loss of natural habitats. A major concern is that we are losing species from extinction," Eisner said. "Loss of species means loss of chemicals, chemicals potentially unique in nature, not likely to be invented independently in the laboratory."

According to Eisner's proposal, chemical prospecting would begin at screening laboratories set up where the plants and animals live. Exploration rights would be sold to companies by individual countries, on a profit sharing basis. Those payments would reward conservation of natural resources rather than their destruction. Debtor nations would have the chance to convert part of their indebtedness to local-currency investments by establishing and staffing the local screening laboratories. The screening effort would provide employment for Third World scientists. "Right now we're just trying to get the ball rolling," Eisner said.

Eisner is probably best known for being a pioneer in the field of chemical ecology, specifically for his discoveries of the oddities in nature. Working closely with Meinwald, Eisner describes relations among animals and between animals and plants by means of chemical signals, deterrents and attractants. Trying to discover what makes it possible for insects to survive against their enemies is one experiment. The work done by Eisner and Meinwald has led to a greater understanding of that behavior in the ecology, evolution and survival of animals and insects.

If you were to ask Eisner what his one love is, he would invariably answer insects. The professor focuses much of
his research on insect communication. “I’ve had an interest in insects since I could walk. And my parents were very supportive of my interest,” Eisner said. His discoveries of chemical messengers in relationships between insects and their mates, kin, enemies and food have prompted further examination into the communication channels of living creatures, including humans.

Recently, Eisner and Meinwald have been studying mating selection in moths. They have concluded from their work that the female is very choosy in her mate selection. “The female wants proof that the male can provide her with a gift that she can put in the egg for protection,” Eisner explained.

In addition to his research projects, Eisner is committed to human rights efforts. He plays an active role in trying to help oppressed scientists around the world leave their countries. The Soviet Union and Chile have been two countries high on the list of oppression. The professor is a committee member of the National Academy of Sciences and he also works through Amnesty International. “My work in human rights requires a fair amount of time, and can be very frustrating. But it is a great feeling to help someone get their freedom,” Eisner said.

As a complement to his research, Eisner focuses his time on teaching undergraduate courses. He lectures in Neurobiology and Behavior, an animal behavior course and together with Meinwald, they teach Chemical Communication. “It’s a lot of fun to be able to talk about what I love the most and get paid for it,” he said.

Kathy Druckman ’90, a former student in the animal behavior class, said, “Professor Eisner was one of the most dynamic lecturers I’ve had at Cornell. He made learning about insects fascinating. And the slides he used in class enhanced my interest in insect communication. He showed sincere enthusiasm in the subject.”

The secret to Eisner’s lecturing success includes a number of key factors. According to Eisner, a lecture should be informative, convey a point of view, be interesting, create a long lasting effect and the speaker should show an interest in the topic. As an added distinction, Eisner incorporates much of his research findings into his lectures, which complements and up-dates the course material.

Every other year the professor takes a small number of students to Florida for an intensive two-week program he calls exploration and discovery. “Every student discovers something and it’s a chance for all of us to learn together,” Eisner said. The program is a great opportunity for students to get experience in the field of research science.

Fieldwork also provides Eisner with the opportunity to take part in his favorite hobby—photography. As you walk into the professor’s office, the first thing you notice is the huge collection of photographs of his family and work displayed throughout the room. His nature shots attract immediate attention with their colorful and realistic detail. An accomplished photographer, Eisner has had dozens of photographs published in magazines.

You would think that Eisner would have little time left for other activities with all his academic responsibilities, human rights efforts and photography work. But indeed he does. Even with the professor’s busy schedule, Eisner is an avid squash player. As he jokingly said, “Squash is a priority, I do everything else in my spare time.”

Amazingly, Eisner finds time to pursue his musical interest—playing the keyboard. At one time he wanted to be a musician but his interest in insects took precedence. And if that were not enough, Eisner recently conducted an amateur orchestra in Boston in December, 1989.

Eisner has made many contributions to society, from opening a new field in biology to advocating chemical prospecting, to aiding in the release of scientists from their countries. And most importantly the Cornell biologist truly enjoys his work. Considering all the professor’s accomplishments, it has become easy for Eisner to joke about that rejection letter from Cornell.
Life Before Lynah

“Hockey Practice Today. Providing that it does not thaw, all candidates for the hockey team are requested to report at Beebe Lake this afternoon. Yesterday the ice on the lake was the best so far this season.”
— The Cornell Daily Sun, 1906

IT WAS BEFORE THE SCREAMING fans and the flashy uniforms, before the flying slapshots and mile-long ticket lines. It was even before Lynah Rink. It was 1896 and the Cornell hockey tradition was about to emerge.

In 1896, a group of Cornellians travelled to New York City to play a hockey game, losing 8-0 to the St. Nicholas Club. Student discussion spurred interest in the sport and by January, 1900, professor of engineering “Johnny” Parson had collected $150 to build a hockey rink on Beebe Lake. The resulting 200 by 80 foot rink was enclosed by two-foot high wooden boards, separating it from the general skating area.

For years a warming house called “Johnny Parson’s Club” stood where Entrepot stands today, as a reminder of Parson’s contribution. “For five cents you could check your shoes, and upstairs you could get a cup of coffee or a light dinner,” said Raymond McElwee ’40, captain of the 1939-40 Big Red team. “The J.P. Club was a good place to get warm when it was ten below zero,” he said.

Parson’s rink was completed in 1900, although no formal Cornell hockey association had yet been formed. One group of impatient Cornellians practiced informally and on February 12, 1900 played an intrasquad scrimmage, tying 2-2 — Cornell hockey was born.

Because Cornell was not yet a member of the Intercollegiate Hockey League, a schedule was difficult for newly elected Captain G.A. Smith to procure. In early March, Smith held a meeting in the Delta Upsilon house in which the team decided that the IHL’s $100 admission fee was too steep for the 1900-01 season.

Under Smith, however, the Red was played until 1902-03 when the University seven (early teams had seven rather than six players) beat Princeton but lost to Yale.

Unfortunately, Cornell hockey was forced to disband following an interesting incident in 1903. One of the Red’s more promising players was expelled from the University; when the team travelled to its next game the manage-

A 1930 Big Red hockey game on Beebe Lake. Horses, such as the ones in the background, were sometimes used to pull snow off the ice.
however, in what the Cornell Daily Sun called "courteous but pointed refusal."
The new Red team travelled to Rochester in February, 1905, only to find a second disbandment upon their return.
The faculty argued that no leave of absence had been granted and that the management had broken several rules.
As a result, hockey was officially banned until 1906.
It was a junior named Ralph Lally who helped bring hockey back to Cornell in November, 1906. With no coach, Captain Lally led the Red through the 1906-07 and 1907-08 seasons, capturing six consecutive games.
The IHL finally granted admittance to the 1909-10 Cornell seven, joining them with Harvard, Yale, Princeton, Dartmouth and Columbia. Under Cornell's first hockey coach, Talbot Hunter, the Red finished third in the league behind Harvard and Princeton.

The Red's pre-Lynah days culminated in the 1910-11 championship season. Under Hunter, the Cornell seven swept the league, finishing 10-0 to capture the IHL crown.

It was after this winning season, however, when Cornell hockey ran into trouble again. The IHL itself disbanded due to financial problems and the oncoming world war. In Ithaca, worsening ice conditions made practices less dependable and scheduling difficult. At times the only pre-game practice available was on a gymnasium floor. The Red's record reflected these conditions; Cornell finished 0-7 during the 1912-13 season under Coach Edmund Magner and did not have a winning season through 1916, when hockey disappears from the Cornell records.

In 1920 Big Red hockey reemerged under former professional hockey player Nicholas Bawlf. Bawlf arrived from Canada to coach the Cornell seven and remained with the Red until 1947. Many fans attribute Bawlf with keeping hockey alive during the financial problems and poor ice of the 1920s and 40s.

"He was a good coach because he made you work whether you wanted to or not," said McElwee. "He felt that the best experience was in scrimmage. If you didn't already know how to skate or shoot you had no business being out there."

As hockey entered the 1940s, many teams acquired indoor rinks while Cornell still struggled with Beebe Lake. Big Red players continued to shovel the ice themselves, often interrupting practice to clear new snow or fill cracks in the ice. "Army had a beautiful, big inside rink," said Dave Cutting '48, a Cornell wing both before and after World War II. "When they came we were like peasants, the rink was so old-fashioned. The army boys were surprised that we could put up a good game without a good place to skate," he said.

Because of Beebe Lake's unpredictable ice, the Red averaged only about three practices for each game, said Cutting, and many games were postponed. "The ice was sometimes a problem," said Cutting, "but the guys were rugged and liked being outdoors. There was a great esprit de corps."

Ithaca was not yet a hockey town, however, and the Big Red's pre-Lynah hockey was not yet a spectator sport. The usual crowd was no more than 25 to 30 girlfriends and fraternity brothers, said Cutting. "It was cold out there and you might get a puck in the face," he said. "A big, big crowd would be 50."

The 1946-47 season was Bawlf's last; he left Cornell with a 42-72-4 record. Two of the season's home games were cancelled due to soft or non-existent ice and the practice-hungry Red lost every game. Cornell could no longer compete against teams with indoor ice and, following the 0-4 season of 1947-48, hockey was dropped from the athletic program.

Cornell hockey was not to reemerge until ten years later when a then-anonymous alumnus donated $500,000 to build Lynah Rink. Since then, hockey has changed as much as its fans. Rules, uniforms and skills have slowly evolved into the fast-paced and exciting Big Red tradition we know today. "So now Ithaca is a hockey town," said Cutting. "Believe me, it's a hockey town."

by Julie Mazur '90
Back From the U.S.S.R.

FOR AS LONG AS MOST OF US CAN remember, we were taught that the Russians were the "bad guys" or even the enemy. But with all the talk of "glasnost" and Soviet reform these days, many of us wonder what the Soviet Union is really like.

Dr. Herb S. Aldwinckle, Chairman of the Department of Plant Pathology at the Geneva Experiment Station, recently returned from a four week trip to the U.S.S.R., and got the chance to see firsthand what goes on behind the Iron Curtain. The primary purpose of his trip was to collect wild apples and other fruit seeds, but he managed to get a good look at Soviet life along the way.

Although it was the first time he had travelled to the Soviet Union, it was not the first contact he had had with Soviet life. Aldwinckle acted as host to a Soviet scientific delegation for a week in July of 1988.

Aldwinckle paid a return visit to the Soviet Union during the summer of 1989 with two colleagues, Beth Dixon, an apple taxonomist from Cornell, and Dr. Calvin Sperling of the USDA in Beltsville, Maryland. He and his two travelling companions were invited to the U.S.S.R. as part of a bilateral agreement with the Soviet Union on conservation of the environment.

Three of the four weeks the scientists were there were spent collecting plant material in the mountains. They travelled to several different sections of the country including Dushanbe, the capital of Tajzhekistan, Tashkent, the capital of Uzbekistan and Alma Ata, the capital of Kazakhstan. Aldwinckle pointed out that in the Kazakh language, Alma Ata means "Father of Apple." "There's good evidence that the cultivated apple might have originated there," Aldwinckle. "There are still a lot of wild apples in the forests of those mountains."

At each of the places they visited, their hosts drove them out into the mountains to collect apple samples as well as wild grapes, almonds, apricots, pears and pistachios, mostly in the form of seeds. "We gathered a total of over 11,000 seeds from over 120 different trees," Aldwinckle said. "Aside from the seeds, we also gathered many herbarium specimens."

During his visit, Aldwinckle noticed that the food supply of things such as produce was not very good. "It's not abundant and it's not good quality," said Aldwinckle. "The produce you find in supermarkets has obviously not been handled very carefully." He said that there are produce stands on the streets which carried much higher quality fruits and vegetables.

Aldwinckle blames the Soviet political and economical system for the low quantity and quality of available produce. "The people and the climate are capable of growing almost all temperate crops," Aldwinckle said, "but there's no incentive to grow good, quality material at the moment."

Aside from produce, Aldwinckle said that the supply of food in general is very bad. "It's very difficult to get into a restaurant and get a meal," he said. "And the whole range of stores that we have here just does not exist there. You could not find something like a 'K-Mart' or a '7-eleven' and the things available in them. You go into a store and there may be one of some item, if they have it at all. There's just no choice."

One of the things that Aldwinckle found interesting during his visit to the Soviet Union was that when they ordered wine with their dinner, it had been imported from another country. "When Gorbachev came to power, he tried to cut back on the excessive consumption of alcohol that was going on," Aldwinckle said. "Besides cutting back on vodka, he also cut back on wine and destroyed many of the country's vineyards. Although the production of vodka is still high, only imported wine is available in many restaurants.

The American group travelled with a translator throughout their stay and was also accompanied by guides from Moscow through most of the trip. "They were very helpful and people were pleased to meet Americans," he said. "We were very well looked after."

Now that he is back in the states, Aldwinckle has started working with the material he collected. "We have already deposited the samples in the National Apple Collection here at Geneva," Aldwinckle said. "We are going to be growing plants from the seeds next spring. We will be looking at their isoenzyme patterns, a method of being able to tell how closely related different plants are to each other. We will also be checking them for resistance to four different diseases. We obviously hope that we can find some resistance that we can use in our breeding programs here at Geneva."

Aldwinckle said that he is glad he had the opportunity to go to the Soviet Union at this point in the country's development. "It is a very interesting time to be there because things are changing so rapidly both politically and economically."

But when asked if he would recommend travelling there to someone who had the opportunity, he expressed mixed feelings. "It's a good trip if you would like to see something different and are prepared to put up with some difficulties and discomfort. It's not at all like going to Paris."

Aldwinckle does hope that the improvements in East-West relations that are being made right now will continue for the benefit of both countries. "I hope we can continue to cooperate with the people that we met. They are interested in cooperating with us and to maintain the relationship would be beneficial to both sides."
EVERYONE HAS HEARD OF INVENTORS patenting their inventions to make sure that no one steals their ideas, but how often do you hear about patenting animals? The whole concept seems bizarre and unreal. Well, not only is it real, but an animal has already been patented in the United States.

So far, only one genetically engineered trait in a higher animal has been patented. The Harvard mouse was genetically engineered at Harvard University, and harbors a gene which is needed for activation of breast cancer. The mouse will serve as an animal model for human breast cancer and will be used to help find a cure for that disease. Causes and treatments of breast cancer can then be studied without endangering human patients.

The idea of patenting multi-celled animals was sparked by the 1980 patenting of a bacterium isolated and selected for the suitable decomposition of crude oil. After the patenting of that bacterium, scientists predicted the patenting of higher animals.

The patenting of higher animals became a reality on April 3, 1987, when the Board of Patent Appeals and Interferences of the U.S. Patent Office ruled that higher animals could be patented. Scientists, corporations and others who have genetically altered animals to have certain traits can now obtain control of and maintain sole rights to their use.

According to William Lesser, an associate professor in the Department of Agricultural Economics at Cornell's College of Agriculture and Life Sciences, "It takes time and money to recognize strains and isolate certain traits in a multi-celled organism. It's a real investment." And since these traits can be passed on, the need to protect the investment by patenting is paramount.

As one might guess, the procedure for patenting animals is different from patenting a car or some other more traditional invention. In all patent cases a set of instructions for the use of the invention and a copy of the invention must be put on file. But just how do you put an animal on file? Freezing a fertilized egg from the animal with the patented trait is the way a copy of an animal is put on file.

These embryos are then stored in containers of liquid nitrogen and kept at 319 degrees below zero Fahrenheit. "These embryos have the potential to last several hundred years at low cost," said Robert H. Foote, a professor in the Department of Animal Sciences in the College of Agriculture and Life Sciences.

At any time several embryos can be taken "off deposit" and injected into fertile females of the same species. The offspring will be born with the genetically engineered trait and will be exactly the same as the original animal.

While the Harvard mouse is the only animal that has been patented, some 40 more applications are being reviewed, according to Lesser.

The possibilities of animal patenting seem endless. Not only are animals that serve as models for human diseases being considered for patenting, but farm animals genetically engineered for size and resistance to disease are also being targeted for the possibility of patenting.

Although patenting animals may seem to have advantages for those directly involved, many people believe animal patenting to be ethically wrong. Many animal rights groups believe animals have the inherent right of living their lives unencumbered by humans, Lesser said. However, neither Lesser nor Foote see ethical problems relating to animal patenting.

Foote said, "I see no problems with patenting research animals. One must be realistic. We can't have a useful product without patenting. Companies won't invest in research projects. They won't stay in business if all the money they pour into research is wasted by the possibility of 'stealing' their product. They have to protect the useful product that they invested money in."

Although it has the potential to become a multi-million dollar business, both Lesser and Foote believe that animal patenting will help humans only by providing animals which can serve as models for human diseases.

One thing to be aware of is that an animal is patented only because of its unique trait. For example, in the case of the Harvard mouse, the only thing that has been patented is the unique gene for breast cancer. All mice are not patented. Lesser said, "Don't worry. Someone won't come along and monopolize an animal."

The potential for animal patenting is still being explored and the details concerning it are vague. Nevertheless, with technological advances it is becoming more of a reality every day.
“MEDITATE?” THE YOUNG WOMAN watched him as he entered his apartment building. She turned and walked down the street, shaking her head, saying to herself, “But he looks so normal. He’s on the tennis team, he’s an agricultural engineer. He even dresses well.”

She turned back around for a glimpse at his window. “Huh,” she said. “He just doesn’t seem like the type who would dress up like a guru, listen to weirdo music and meditate.”

She is partially right. He does not dress up to listen to abstract music, but he does meditate. What the young man is about to experience is a brief period of rest. He will release his tension, clear his mind and become more aware of how his body functions best.

Meditation does just that according to Steve McLaskey, a candidate for the Master of Science degree in vegetable crops in the College of Agriculture and Life Sciences. He is president of the Cornell Transcendental Meditation (TM) club, and said, “It is preparation for more dynamic activity. It draws the mind and body back to a state of rest so they can go forward with more potential.”

So many people look for outlets for stress and anxiety that build up from their work. Go ahead, admit it . . . you’ve tried joining the health club, you’ve tried learning to play the drums, you’ve even tried your kids’ video games. You may feel better for a short period of time, but you never fully eliminate your inner tensions.

Something you may prosper from is what Dr. Herbert Benson of the Harvard Medical School calls the “relaxation response.” In 1974 Benson reported that during relaxation the hypothalamus (a small, hormone-secreting gland at the base of the brain) signals the central nervous system to decrease its activity. The overall result is a more relaxed body, which is less susceptible to the onset of stress.

The “relaxation response” is inherent within all meditation methods. Three of these methods—Benson’s relaxation exercise, forms of Buddhist meditation and Transcendental Meditation—have been most widely studied in the United States, said Daniel Kindlon MS ’79 PhD ’81 of the Department of Education.

McLaskey practices TM on a regular basis. Its founder, Maharishi Mahesh Yogi, defines TM as a method of turning attention inward toward the more subtle levels of thought.

“I started 18 years ago, as a senior in high school,” McLaskey said. Like most people who learn meditation, McLaskey needed an all encompassing solitude to help him center his life.

At about the same time McLaskey learned meditation, and started experiencing its effects, research measuring the extent of these effects was being documented. In fact, he remembered, “The first research [on TM] was done a year before I started.”

In 1970 Robert Wallace investigated the physiological effects of TM. He concluded that the meditator decreases oxygen consumption and carbon dioxide exhalation, resulting in a decrease in metabolism. This process of lowering the body’s energy level coincides with a decrease in heart rate, breathing rate and muscle tension. When heightened, these are symptoms of stress.

“But you don’t need TM to do that,” said Dalva Hedlund, Associate Professor of Psychology and Education in the College of Agriculture and Life Sciences. The ancient precursor to TM, mantram yoga, the Benson relaxation exercise and the beginning stages of Zen (a Buddhist meditation) are all performed much like TM. The meditator relaxes in a comfortable position and repeats a one syllable word (mantra), until the mind reaches a state of altered consciousness.

Although an impressive amount of meditation research focuses on TM, other studies show that similar results stem from other meditation methods. Remember the “relaxation response”? Benson concluded that brain-wave coherence increased while metabolism, respiration and heart rate decrease during practices of yoga, Zen and the Benson relaxation exercise as significantly as it decreases during TM. You can reap the same results from alternate resources.

Hedlund has tried various forms of meditation, and he believes that a person can benefit from each type in an individual way. For McLaskey it is a way for him to feel better about himself.
Meditation

What about becoming a more dynamic person, ready to stand up to the challenges of our fast-paced working world? "Meditation can be useful to help reduce stress," said Hedlund. "It may open up new levels of awareness." Hedlund also thinks meditation can increase concentration by helping a person ignore disturbances.

Surprisingly, Kindlon's thesis reported no direct influences of meditation on creativity. However, it seems logical to assume that if both sides of the brain are synchronized and the mind is uncluttered, creative images should be more available for analytical thinking.

Mclaskey explained that many students in the Cornell TM club meditate to help increase their ability to think and their memory capacity. But we must be aware of how the ancient art of meditation is manipulated. It was not originally intended as a method of improving GRE scores or impressing the boss. "I'm a fan of meditation," said Hedlund, "but not of TM. It's a copyrighted form of meditation."

That is not to say that TM is not effective for those who practice it. However, learning TM can be expensive. Initiation fees for students are $150 and more for non-students. You can even enroll on a "family" basis. Hedlund believes "You can do everything TM does for free."

Around the world, meditation is a therapeutic technique designed to improve a person's self-awareness. It is not a cure-all for the problems we have in this society. Secular forms of meditation have been adapted to our western culture. You do not have to become a Buddhist priest or an Indian guru to enjoy the deep relaxation and physiological benefits. You just have to think.

by Karen de Seve '90

There are many forms of meditation, all of which have similar effects on the mind and body. The most popular methods for western culture are forms of concentrative meditation performed while the meditator rests in a comfortable position.
HAVING A GUIDE DOG IS A LIBERATING experience for Tiina M. Ilissoo of Rochester, New York. Ilissoo's guide dog, Blythe, has made a huge difference in her life in terms of mobility, confidence and independence.

Blythe guides Ilissoo nearly everywhere, including to her job as a special education teacher in West Henrietta, New York. Ilissoo is blind and has used guide dogs for 13 years. She feels they are safer traveling aids than canes. In addition, "It looks better, and it is a much more graceful way to get around."

Blythe is a four-year-old yellow labrador retriever and trained for her life's work as a guide dog at the Guiding Eyes For the Blind School in Yorktown Heights, New York.

Before her training, a foster family raised Blythe for one year. Most puppies that eventually become guide dogs for blind people are raised by foster families. In this area, the Tompkins County Guiding Eyes for the Blind Puppy Raising Program is jointly administered by Guiding Eyes for the Blind, Inc., and Cornell Cooperative Extension of Tompkins County.

Michele F. Ward '75 is a Tompkins County Cooperative Extension Agent, and serves as a facilitator for the program. "Those families involved in the puppy raiser program find it to be a great experience, and very worthwhile," she said.

The majority of the puppies in the program are born and raised for seven weeks at the Guiding Eyes Breeding Center in Patterson, New York. The puppies are either golden retrievers, labrador retrievers or German shepherds and are bred specifically for good health, temperament and intelligence.

At approximately seven weeks of age, the puppies are evaluated. Those with the most potential are placed in foster homes for ten to fourteen months. Every effort is made to match the needs and temperament of each puppy with the needs and assets of the people in the foster home.

In terms of temper and disposition, puppies are just like people, said Carol A. Barton ’75, area project leader for the puppy raising program. "A bouncy, active puppy is better off being raised by an outgoing person, while a shy, quiet puppy would be better suited to being raised by a person with a more mellow disposition," she said.

The major responsibility of each raiser is to give the puppy love and attention so that it will become a well adjusted young dog. Puppies also need to be walked daily, taught basic good manners and be taken for car rides.

In November, 1989, Barton held the monthly meeting for the six puppy raisers in her area on the Cornell University campus. The puppies walked over the pedestrian and traffic bridges on campus, a new experience. The exposure the puppies receive in these socialization classes is of benefit later when they are formally trained.

The puppies return to the Guiding Eyes School for formal training when they are 12 to 16 months old. They have a minimum 12-week training course with expert instructors. Initially they are taught basic obedience commands: come, sit, down and stay. Later, they learn to lead out rather than walk in a heel position, and to stop at all curbs and stairs.

Each dog learns to assume responsibility for the safe travel of its trainer (and later blind owner). Avoiding obstacles, including overhead objects, crossing busy streets, and traveling on public transportation are important aspects of schooling at this stage. When fully trained, these animals will be able to guide their owners through shopping malls, crowded intersections and on public transportation.

After the 12-week training period, the dogs train for 26 days with the person they have been matched with. Together, they learn the best techniques for traveling safely on stairs, through revolving doors, in and out of elevators, through stores, on buses, and on trains and subways.

A follow-up program for graduates of the program helps to ensure that the dog and new owner are able to continue working together.

Although raising a puppy for nearly a year only to give it up may seem too hard a thing to do, the benefits far outweigh the costs. The use of a properly trained, high quality guide dog can provide a blind or visually impaired person with dignity and self-reliance—the achievement of independence through mobility.

by Cyndie Shearing '90
NRC Supports Field Testing of Engineered Plants

Consumers and farmers are ready to use the plant engineering techniques scientists have been developing since the early 1970s. A 22-member panel of the National Research Council reported that genetically engineered plants and microorganisms pose no new hazards to the environment. Panel member Ralph W. E. Hardy, president of the Boyce Thompson Institute for Plant Research supports small-scale field testing. Hardy believes field testing is the basis for developing more efficient fertilizers, food plants and anti-pollutants. The NRC study, “Field Testing Genetically Modified Organisms: Framework for Decision” was a public interest report for the federal government, and it concludes that molecular engineering methods are not inherently dangerous, and it is necessary for small-scale field testing to precede large commercial use of genetically engineered organisms.

Project Helps Farmers Cut Costs

A seven-state project to give Northeast farmers more information on organic and sustainable farming methods could help them to save millions of dollars annually by reducing the use of pesticides and synthetic fertilizers and by conserving their topsoil. The “Northeast Organic and Sustainable Farmers Network” project is a new collaborative effort involving the National Organic Farmers Association (NOFA), the Maine Organic Farmers and Gardeners Association and cooperative extension systems in Maine, New Hampshire, New Jersey, New York, Vermont, Massachusetts and Connecticut. Project coordinator is Judy Green, an extension support specialist with the Farming Alternatives Project in the College of Agriculture and Life Sciences. Farmers associated with NOFA initiated the project to help experienced organic farmers share their knowledge of organic methods with conventional farmers, and R. Dean Boyd with the Young Scientist Award. Boyd, an associate professor of animal nutrition and metabolism, received the award for his research accomplishments with porcine somatotropin, or porcine growth hormone. When administered to swine, somatotropin increases the growth rate and efficiency of swine growth. The result is a reduction in production costs for the producer, and leaner, less expensive meat for the consumer.

New Grape Extension Coordinator

Martin C. Goffinet, a former research associate in the field of fruit anatomy, was recently named Cornell’s statewide Grape Extension coordinator. He will continue to be headquartered at the New York State Agricultural Experiment Station in Geneva, New York, but he will travel throughout the state coordinating and enhancing ongoing communications among Cornell scientists, Extension staff and other members of the grape industry.

Administrative Changes at Geneva

Three administrative changes at Cornell’s Agricultural Experiment Station at Geneva took place during January 1990. Dr. John B. Rourke, professor of chemistry in the Department of Food Science and Technology, retires as director of Analytical Laboratories on January 31. Rourke has been associated with Cornell since 1963. Dr. Karl J. Siebert of Troy, MI assumes the position of chairman of the Food Science and Technology Department. Siebert received his BS, MS and PhD degrees in biochemistry from Penn State University. His concentrations are in computer science and biophysics. Dr. Yong Deng Hang was promoted from associate professor to full professor. Hang received his PhD in microbial physiology from McGill University in Montreal, Canada, and has been at Cornell since 1968. His studies specialize in management of food processing waste.

Donald W. Roberts, an insect pathologist at the Boyce Thompson Institute for Plant Research since 1965, received the L.O. Howard Distinguished Achievement Award from the Eastern Branch of the Entomological Society of America. Chosen from 1,700 ESA members, Roberts was honored for his contributions to his field. His research includes studies on fungi and insects.

Robert C. Baker, professor of poultry and avian sciences, emeritus, was named a Fellow of the National Poultry Science Association. Baker was recognized for his contributions to the food science industry, specifically his developments of new poultry meat and egg products.
TWO PEOPLE SQUAT IN A FIELD TO peer at the condition of an alfalfa crop. Another sits at a computer to study the results flashing across the screen. Still a fourth is in a lab, setting up a series of tests on a new strain of cucumber.

What do all these people have in common? They are all involved in the extensive Integrated Pest Management (IPM) program, a program designed to help crop growers reduce their dependence on chemical pesticides in agriculture and improve their crop management techniques.

Since 1973, when the program started with 1,800 acres of apple orchards, the New York state IPM has grown to include some 24 crops and 86,000 acres, involving approximately 400 growers. Similar programs exist in other states. IPM now covers four different kinds of crops: fruits, vegetables, dairy field crops and ornamentals.

IPM, developed jointly by Cornell and the New York State Department of Agriculture and Markets and implemented through Cornell Cooperative Extension, encourages the use of alternative farming methods. "Agents try to demonstrate all the methods available—pest forecasting, pest monitoring, thresholds and chemical, biological and cultural control methods," said James P. Tette, Director of the New York State IPM Program. The threshold of a crop is the amount of pest damage that can be endured without losing the crop.

Tette believes that IPM has developed in response to the multitude of pressures that growers are experiencing. Increased regulations for pesticide safety and handling have increased production costs. Growers must now also post signs notifying the public when and where they will be applying pesticides. "Growers are getting letters from supermarkets and processors asking them to reduce their use of, or to not use at all, chemical pesticides," Tette said.

IPM's response to growers' interest in other pest control methods is a three year program in which the grower can see firsthand the effects of integrated pest management. Scouts and farm advisors walk the growers' fields to check for crop damage. Another aspect, pest forecasting, uses weather information to predict the chances of insect or disease increases.

As the program continues, agents and growers explore the different methods suitable for certain crops and fields. They may consider cultivating their soil, rotating their crops or harvesting earlier to combat insect and disease buildup.

Growers are cautious about using new methods on their land, but they need not be. "IPM is still viewed as a risky program, but it actually has less risk," said Tette. Interest has obviously taken root, as 400 growers across New York state were involved in the program during 1988.

The concept of an integrated pest management program sprouted in the 1960s and 70s, when researchers observed that some pests were developing resistance as a result of heavy use of chemical pesticides. In 1973, Cornell Cooperative Extension received funds to begin a program to disseminate that research. With the combination of Cornell research and state and federal funding, New York state has one of the leading IPM programs.

The research behind IPM is as important to IPM as the programs, it can indicate how programs should change to meet new needs. Tette said that IPM programs are beginning to place more emphasis on bio-intensive pest management.

"We want growers to use control agents like pheromones and bi-pesticides," he said. Bio-pesticides are naturally developed pesticides that have a narrower target than chemicals and are safer for the environment. Scientists are also developing pest-resistant varieties of crops.

"We are also trying to see if the general public will reward IPM growers,'” said Tette. He envisions a labelling system for IPM-grown crops and a registry program so that IPM growers can be recognized in the marketplace.

“We are just in the beginning stages of this,” he said.

With farming as competitive and sophisticated as it is, this tactic could improve the profits of IPM growers. IPM programs try to start cost-sharing from the beginning, and costs to the grower can range between $2.50 and $25 per acre, depending on the crop, Tette said.

This cost, however, is offset by the money saved on pesticide use. According to an IPM brochure, New York state onion growers saved about $23 per acre during 1987 and New York state apple farmers using IPM applied a total of 19 fewer tons of pesticides than did non-IPM apple farmers.

Tette believes that there is a lot of potential for entrepreneurs as well. Once the three-year program has run its course, growers usually hire consultants from the private sector to continue the job. Tette said that the need for consultants has increased, since growers now realize that a consultant knowledgeable about IPM can fulfill their needs far better than a salesperson from a pesticide company.

As one grower was quoted in IPM’s annual report, “In our industry, with all the goings on about pesticides, I think it’s [IPM] the coming thing; we have to tighten our belts—not just throw things out there—not only to save money but to save the environment. I think IPM is the thing of the future.”

by Elizabeth J. Hujsak ’90
About the Issue

The March issue of the Cornell Countryman covers a wide range of topics related to the College of Agriculture and Life Sciences. This issue includes articles on traveling experiences of students and faculty in an academic setting. Students gained a valuable experience while visiting Puerto Rico, and working with the students there. In addition, you can get a look into students' adventures at sea. You will also find articles on environmental concerns, new campus projects, and a course designed for the visually handicapped. The articles will give you an insight into what has been happening within the College. With so many exciting topics you will be sure to enjoy this issue of the Cornell Countryman.

Note: New York State Electric and Gas Corp. has been contributing partial support to the winter coldness research carried on by Dr. Robert Zall and his group, reported on in the December, 1989 issue of the Countryman.
Birding for the Blind
by Laura M. Glazier '90

AS YOU WALK THROUGH THE woods on a warm spring day the sun is shining and the trees and flowers are blooming. You hear the sounds of birds singing all around you. But with so many noises, how do you distinguish specific birds and other wildlife by only hearing their sounds?

Thanks to the accomplishments of Cornell ornithologists, the production of the first bird identification course for the visually handicapped has introduced nature lovers to the world of natural sounds. A two-cassette, 130-minute "A Birdsong Tutor" was developed by the Cornell Laboratory of Ornithology, in cooperation with the National Library Service for the Blind and Physically Handicapped of the U.S. Library of Congress and The Canadian National Institute for the Blind.

The bird identification course teaches the sounds made by common birds, frogs, insects and mammals of the eastern United States and Canada. Most of the field recordings were taken from the personal collection of Lang Elliott, author of "A Birdsong Tutor" and former staff member of the Cornell Laboratory of Ornithology. In addition, recordings were taken from the Cornell Library of Natural Sounds, the world's largest collection of sounds.

The concept of the birdsong tutor was developed after Elliott discovered that narrated bird guides were not available to the visually handicapped or to the general public. With the input of the three institutions, a tutor was produced which could be used without the use of other books or outside sources.

The course teaches the distinctive calls of over 70 species by placing the listener in a variety of habitats. As Diane Johnson, Director of Operations for the Laboratory of Ornithology, explained, "Most other field guides do not tie birds into their habitat." This tutor is unique because it separates birds and wildlife into their particular city, suburban or farm setting. The listener can then associate bird calls with certain surroundings.

The author's enthusiasm shows through as you listen to the tapes. Elliott takes the listener on various excursions and makes you feel like you are walking through a field or swamp. For example, Elliott takes you for a walk through a downtown shopping area of a small city. He describes the sights as you hear the sounds of the surroundings. As Elliott explained, you will hear the song of the house finch or the cooing of the rock dove in the city setting.

"The tutor gives a step-by-step introduction into the world of natural sounds," Johnson said. An added bonus to the birdsong tutor is that the tape provides mini quizzes and reviews for the listener. You as a listener can test your knowledge of natural sounds even before stepping out of the house.

In addition to the sound recordings and particular habitat settings, the narrator gives a visual description of each bird. "I cannot see these birds because I am blind, but through the use of the audio description I can visualize them," said James Sanders, National Director of The Canadian National Institute for the Blind. "My family are avid birders and now I believe that I too can participate.

"It's the first time I've ever been able to find an audio guide to bird identification that made any sense to me," Sanders continued. "The tape stands on its own—you don't need to use any other guides with it."

As the course progresses, Elliott gives the listener some helpful tips on how to remember sounds. He suggests that the listener try to discriminate natural sounds. For example, the tufted titmouse sounds like it is saying "peter-peter." So Elliott suggests that the listener use the phrase "peter-peter" as a memory aid to remember the sound and name of the tufted titmouse.

Although "A Birdsong Tutor" was developed for visually handicapped individuals, sighted listeners have been encouraged to use the tape as well. "The tutor is a good introduction for both blind and sighted individuals," Johnson said. "And best of all you don't need to know anything about birds to enjoy this tape."

The tape can be purchased at the Cornell Laboratory of Ornithology for $14.95. Copies of the course also have been added to the collections of the National Library Service and The Canadian National Institute for the Blind for free loan to their patrons.

"A Birdsong Tutor" has provided bird enthusiasts with an enjoyable way to learn about an abundance of natural sounds heard in a variety of habitats. As Sanders said, "After listening to the first side of the tape, I was able to easily identify three birds on my way to work the next morning."
A PATHWAY
To Campus

OUTSIDE WILLARD STRAIGHT HALL is a narrow path that leads towards Collegetown. Surrounded by canopy-like trees many people are either sitting on benches talking or lying on the grass to catch some rays.

But something doesn't seem quite right. There is no grass or benches or even canopy-like trees outside Willard Straight Hall. The only thing there is Central Avenue, a strip of pavement that has been closed off from cars for months. And no one would ever lie on it to get a tan.

Well, it may not exist now, but starting a year from the summer of 1990 the construction of a pedestrian mall will be under way. When it is completed, Central Avenue will be converted from a vehicle-friendly street to a people-friendly boulevard.

The project has been on people's minds for years, a key event being the finished construction of the underground reading room at Uris Library. That was when Cornell realized that Central Avenue, which is now in two parts, was not only unattractive but non-functional as well.

Central Avenue passed straight across the arts quad in front of the Morrill, McGraw and White halls, before it was reconstructed to go behind these buildings and around Uris Library to the east. Later, it was constructed to go around Uris on the west side.

“The Avenue is no longer functional,” said John Ullberg, a landscape architect with the Campus Planning Office that is working on the project. “The heaviest pedestrian traffic in all of Tompkins County is in between McGraw Tower, Willard Straight Hall and the Campus Store, which makes Central Avenue a dangerous intrusion, if cars were allowed to use it,” he said. Also, the area is a giant student meeting place and the Avenue cuts it right in half. So, it was thought that something could be done to make it more attractive.

The architectural firm Zion & Breen was the first to come up with ideas for reconstructing Central Avenue all the way from Collegetown to the Johnson Museum, focusing on the area from Central Avenue to McGraw Tower. “At the time, however, there was no funding for the project, so it was left in limbo. Finally, around the winter of 1988 to the spring of 1989 the Trustees endorsed this as a project that needed priority,” Ullberg said. Funding will come from an interested benefactor and donations from several classes, he said, though he wouldn't get specific. An estimated $1.5 million is needed for the project.

In the summer of 1989 cars were banned from Central Avenue and in the fall of 1989 Clarke & Rapuano, a New York landscape architecture firm, was hired to make the conceptual design more concrete.

Some of their objectives for the project are: leveling out the plaza between the Straight and the Campus Store and enhancing its quality of landscape; improving and expanding bicycle storage; creating a shaded court for activities; improving lighting; flanking the walk with canopy-type trees; and lining the walk with benches or low seating walls.

“We're going to try to make the most of the view up to McGraw Tower,” Ullberg said. “And we are going to remove the conflict of automobiles and pedestrians in that area.”

“Central Avenue is very unsightly, to say the least, and a non-functional area,” said Bob Blakeney, an architect with Architectural Services who is working on the project. “The purpose of the mall is to make the pedestrian the priority in the area and take the cars away, he added.

“Fundamentally, Central Avenue is a significant pedestrian entry point to

Central Avenue in the early 1900s.
campus," Ullberg said. "Right now, the area is a no man's land—it's not for pedestrians, it's not a parking lot, it's not a cul-de-sac," he said, "And it is becoming more and more unsightly."

"It's an idea that should have been instituted a long time ago," said Leonard Mirin, one of the landscape architecture professors who is on the design review subcommittee of the project. "We wanted to make a grand entrance for pedestrians arriving at the walking campus." They wanted a quality that reflected the nature of the campus, he said, but they also wanted to keep the design simple.

Construction is slated to start in the summer of 1991, Blakeney said. That leaves only ten weeks until the fall semester starts. "The year before construction starts, however, will be used for fundraising," Ullberg said.

The project should only take two summers to complete. "There's only a narrow window of opportunity to get in there," said Ullberg. "But, we will try to get as much work done as possible."

While the construction is going on, however, the normal activity of buildings such as Willard Straight and the Campus Store are going to be temporarily disrupted. During the summer, the Straight's west side will be completely accessible at all times while either one or the other of the east side entrances will be accessible. Consequently, the Campus Store's east side will remain open, but not its west side.

"The construction is annoying," said Blakeney. "But, all construction improves the campus' function and life. We have to look at the long-term result and not the short-term."

According to Blakeney, when the construction is finished, there will still be controlled access for emergency vehicles or trucks delivering large items to a building. For example, a truck may be needed to move a grand piano out of Barnes Hall.

For now, decisions still have to be made. For example, Ullberg and the others have to decide what types of plantings should line the walkway. The use of the same species of trees in rows will give a very formal appearance, whereas a variety of species will look more informal.

Still, Ullberg said that this project has the potential of being one of the best campus community spaces in the country and will be a positive feature of the campus landscape.

William B. Gurowitz '53, Vice President for Campus Affairs, was also positive about the project. "Students need a place for relaxation and enjoyment after a day of the normal wear-and-tear," he said. He wants it to be like the arts quad with students lying all over the place on a sunny day, he added.

When he was a student here, Gurowitz remembers that Central Avenue had huge elms that canopied the road so even in daylight the street was dark. He wants the project "to make Central Avenue look like it used to look."

"I think it's good," said Dan Timerman '90, a horticulture major, about the project. "Actually, it's more than good, it's fantastic. Every time buildings go up, plants come down. As Professor Mower says, 'Plants always lose.'"

The Central Avenue project fits in to the overall master plan of making Cornell a "walking campus." Right now, Gurowitz said, we have a mixed campus. "We are trying to make it more friendly for walkers and less so for cars," he added.

If things go as planned, in a few years those who exit Willard Straight Hall will not only see trees, grass and benches, but also people, rightly enjoying the campus since it was meant for them in the first place.

by Andrea J. Lillo '90
THERE'S TROUBLE AHEAD FOR fruit and vegetable growers who may have to soon do without the EBDC fungicides. The Environmental Protection Agency's proposal to ban these chemicals is based on the possibility that they are in some way carcinogenic.

The acronym EBDC comprises a variety of fungicides called the ethylene bisdithiocarbamates. Some of the more common EBDCs, used to control over 400 different fungi that attack fruit and vegetable crops, are maneb, mancozeb, metiram and zineb.

Thomas Zitter, a plant pathologist in the College of Agriculture and Life Sciences at Cornell University, said that many EBDCs have been in existence for over 40 years and that some were introduced as early as the 1930s. "Mancozeb," he said, "was introduced in 1962 and represents 60 percent of all EBDCs used."

EBDCs are applied directly to the surface of fruits and vegetables and are not systemic; that is, they are not taken up inside the plant. Wayne Wilcox, an assistant professor of plant pathology at Cornell's New York State Agricultural Experiment Station at Geneva, New York, said that the EBDCs are particularly advantageous because they are not site-specific. "A site-specific crop protectant," he explained, "attacks only one of a target's metabolic pathways. Mutation and consequent resistance often results. But the EBDCs consist of heavy metal components, like zinc and manganese. These elements form a complex with many different enzymes and therefore upset a wide array of metabolic processes." No resistance to the EBDCs has yet been demonstrated.

The EPA's concern is not so much with the EBDCs themselves, but with the product of their metabolic breakdown. This is the ethylene thiourea. Zitter said, that is called ETU or ethylenethiourea. While ETU is not a known human carcinogen, Zitter explained that it is structurally related to number of drugs that are used in the treatment of hyperthyroidism. "Like those drugs," Zitter said, "it can interfere with thyroid hormone production when given in large doses. Animal studies employing extremely high levels of ETU have shown an increase in rat thyroid and mouse liver tumors." ETU is therefore listed as a "probable" human carcinogen.

Zitter said that companies have voluntarily withdrawn their registrations on EBDC fungicide products on approximately 55 crops, including apples, cucumbers, lettuce, peaches, spinach and watermelon. The reason for withdrawal, he said, is twofold. On one hand, companies are yielding to the theoretical risk demonstrated in rodent studies. But at the same time, companies are trying to avoid the kind of confusion that surrounded the use of Alar on apples in 1989.

Zitter also said that on December 4, 1989, the EPA issued a proposed regulatory decision adding three new potential crops—potatoes, bananas and tomatoes—to the list of those that may no longer be treated with EBDC fungicides. However, the EPA's final decision will be based on the results of a January 1990 market-basket study.

The market-basket study," Zitter elaborated, "is a multi-million dollar agreement between corporations to pull food products from market shelves and submit them to the Food and Drug Administration for EBDC residue..."
checks.”

The regulation was issued ahead of time, Zitter said, so that the EPA could gain a year by acting in 1989 before the new year began. So while new rations of EBDC fungicides will no longer be available in 1990, any old stock of EBDC in the farmers’ possession may be used according to the label.

The EPA, in its statement, assured the public that the “continued use of EBDC fungicides during the 1990 cropping season would pose ‘negligible risk.’”

So far, Zitter said, “90 percent of the food tested has revealed no detectable amount of mancozeb, and trace amounts were below the legal tolerance level established by the EPA.” Zitter said that this is understandable given the fact that the normal processing of produce removes much of the EBDC residue. “And washing done by the consumer,” he added, “reduces even further any chemical residues that remain.”

Does this satisfy a concerned consumer? Not necessarily, Zitter explained that it’s hard for the public to accept the idea of tolerance levels. As far as the consumer is concerned, either the food contains chemical residues or it doesn’t.

But the banning of the EBDC fungicides will mean higher production costs and higher food prices for consumers. Zitter agrees with EPA estimates that consumers will face up to $300 million in higher fruit and vegetable prices because crop yields, without the use of these fungicides, will be lower.

The big question: What viable alternatives do farmers have? Not a whole lot, according to Zitter. Farmers could turn to different fungicides, or could opt to use no fungicides at all. The problem with the former option, Zitter said, is that for some crops there are no alternatives. The alternative fungicide that does exist is called Bravo (chlorothalonil) and it is two and a half times more expensive than the EBDCs. But in choosing between a more expensive fungicide and no fungicide at all, Zitter thinks most farmers would choose to pay more.

If fungicides are not used, crop yields will be reduced. Zitter explained that farmers can compensate by planting more acreage. Or, he said, they can maintain their current acreage, in which case the crops will be worth much more. And in which case the consumer will inevitably feel the difference at the supermarket checkout.

Zitter said that the banning of EBDCs will affect the whole marketing system of produce. “Produce is a worldwide business. Those countries that wish to continue exporting produce to the United States will have to comply with FDA regulations.” The effect of EBDC banning, in other words, will be both widespread and long-term.

Is organic farming an alternative? “The farmers who use EBDCs,” Zitter said, “are operating on a large commercial scale. They have an investment in labor, in equipment, in technology.” These farmers, he pointed out, can’t produce the necessary volume organically. Organic farming, for them, is not the answer.

Wayne Wilcox said that the vast majority of growers don’t like to spray with fungicides as it is. Today’s best farmers are able to minimize fungicide use by combining chemical and non-chemical disease control processes effectively. “These are the farmers of the future,” Wilcox said.

People were really scared by the Alar on apples and the cyanide in grapes, Zitter said. The banning of EBDCs is a precautionary measure to avoid a similar recurrence. “I think the American public can be pretty satisfied with the safety of its food,” Zitter commented. “New York state itself does a fantastic job of watching out for us. The bottom line? Well...there’s no such thing as a risk-free world.”
Most people have heard about the systematic cutting-down of the world’s tropical rainforests, especially those of Brazil. Many people, however, still aren’t aware that majestic old-growth forests are being chopped down right here in the United States.

In the Pacific northwest massive old trees, some as big as 250 feet tall and as old as 500 years, are being clear-cut by the timber industry. At one time these majestic trees covered the mountains and valleys of Washington and Oregon. Now, according to literature distributed by The Ancient Forest Rescue Expedition, less than ten percent of these old-growth forests remain.

The old-growth forests, consisting of cedar, hemlock and Douglas fir trees, are huge. According to Tim Fahey, a professor in the Department of Natural Resources at Cornell’s College of Agriculture and Life Sciences, “Some of these trees are ten to 15 feet in diameter and 200 feet tall.”

But size is not the only distinguishing characteristic of these forests. The trees are an integral part of the rich forest ecosystem. They provide homes for many forms of wildlife. Rotting, dead trees provide nutrients for the soil. Falling logs prevent soil erosion and filter the water in streams, providing pure, clean water.

These forests are quickly disappearing because loggers in the timber industry are cutting them down at a rapid rate for export. According to The Ancient Forest Rescue Expedition, the trees of the Pacific northwest account for 75 percent of raw logs that are exported from the United States.

In order to make sure there is a constant flow of wood, the timber industry replants trees to replace the ones that were already cut down. The forests that ensue are known as second-growth forests. These forests are characterized by only one species of tree, usually Douglas fir. These trees are treated with large amounts of herbicides and pesticides and are only allowed to grow for short periods of time. “In order to maintain the timber industry, these second-growth trees are cut down at around 60 years of age or at smaller than three feet in diameter,” Fahey said.

According to Fahey, these second-growth forests are often compared to tree farms—sterile, non-diverse environments that only exist for harvest. Although environmentalists are worried about the cost of second-growth forests to the environment due to the use of herbicides and pesticides, Fahey claims that, if done right, there shouldn’t be much of an environmental problem. “Some sites can grow trees at 60 to 80 year rotations essentially forever. Those soils are forgiving soils.”

Still, environmental concerns remain. The effects of large scale clear-cutting of old-growth forests could cause irreversible damage by forcing the northern spotted owl, a bird that lives, hunts and breeds in these forests, into extinction.

According to The Ancient Forest Rescue expedition, the northern spotted owl can only survive in old-growth, evergreen forests. Thousands of acres of habitat are needed for the survival of the species. According to Tom Gavin, a professor in the Department of Natural Resources in the ag college, “The northern spotted owl needs 2,000 to 6,000 acres of forest per breeding pair.” Clear-cutting the forests vastly reduces the room these birds need to hunt and breed.

Tom Gavin said, “The spotted owl has a real large home range. It has to have a lot of area to reproduce. Food and nesting sites are available in old-growth that aren’t in new growth.”

According to Gavin, These birds can not live in the second-growth forests because these young trees are not old and big enough to have tree cavities for the owls to nest in. They may be able to hunt for rodents there, but they will not be able to live or breed there.

Gavin noted, “Although spotted owls have recently been found living in habitats other than old-growth forests, maintenance of large acres of old growth forests is essential for long-term spotted owl survival.”

As far as the deforestation of the Pacific northwest, it is the environmentalists against big business. The environmentalists are concerned with the forest ecosystem which includes the trees and plants, water, air and land quality, wildlife and the people who enjoy the forests for recreation. They also fear the extinction of these old-growth forests, which can be likened to endangered species; once these forests are cut down, they are gone forever.

The timber industry, on the other hand, is concerned with employment, trade and profits.

According to Fahey, where you stand on this issue depends on what you think is important. “To a large extent it’s a matter of values. What do you consider most important, economic stability for the people in these logging areas or maintaining natural treasures? How much of these natural treasures do we need? And as far as the spotted owl one might argue that jobs for thousands of people are more important,” he said.

Gavin takes a different stance on the issue. “We are giving up an ecosystem unique to North America and an important part of our national heritage when we lose these forests. I’m absolutely against any further cutting of true, virgin forests that took centuries to develop,” he said.

The fate of the old-growth forests rests in the hands of the U.S. Forest Service, but ultimately it is up to the people who live in the Pacific northwest and all over the country to decide whether a booming timber industry is more important than a sound, natural environment.

By Jyna Johnson ’90
DAIRY DUTY

CORNELL IS OVERFLOWING WITH opportunities for students who have various interests. From academics to independent research; from extra-curricular activities within the University to affiliations throughout the nation; from volunteer services to job offers; Cornell encompasses it all. Working in a stable tending cows and calves in a program offered to students interested in animal science is just one example.

For Leslie Appel '90, this is a program she knew she wanted to experience. Fortunately, her instincts proved successful, for she said, “The two jobs I had working in the stables for the past two years have been so rewarding. I never would have had the opportunities I have had if I had not come to Cornell.”

Appel participated in the Cornell University Teaching and Research Center program in Harford from the summer of 1988 until December of the same year. This barn has 800 dairy cattle that need constant attention and care. Cornell students have the opportunity to milk, feed and tend to the daily needs of the cows and calves. She continued to explain that these numerous responsibilities require much patience and dedication.

When a calf is born, the student must immediately dip its navel in iodine to prevent infection. The student must then give the new-born calf four feedings of colostrum, which is the mother’s first milk. Then the calf is ready to be moved to the nursery if it is winter and to the hutches if it is summer. Once the calves are weaned from milk, they are fed grain, and they start drinking from buckets instead of from bottles. Students are instructed to watch closely for dehydration, to give shots of penicillin if any infections are present and to weigh the calves in order to make sure they are properly nourished and gaining.

Moreover, students tending the calves and cows are also instructed on how to always be prepared to act in emergency situations and to watch for any symptoms that may indicate a harmful health disorder. Appel distinctly remembers the time when she had to spontaneously assist in a different kind of calf birth by using chains to pull out the baby calf from the mother’s womb.

Cows may contract milk fever which occurs when their calcium level is low. In this situation, students perform a Sub-Q, or under the skin procedure. This entails injecting a needle filled with electrolyte fluid which contains calcium, potassium, sodium and chlorine ions. This substance actually fills up under the skin and acts immediately to solve the low calcium level problem.

In addition to the barn in Harford, Cornell has its own facilities where students can work and obtain very similar types of experiences working with cows and calves. Through the New York State College of Veterinary Medicine, R-Barn is another place where students can work and earn a small salary. Appel works there on Tuesday afternoons. She milks 50 to 60 cows on a pipeline system and washes their udders with soap and iodine solution.

Just as in the barn in Harford, students at R-Barn must always watch for any developing disorders in the cows. One such disorder that the students must diagnose is mastitis, which is a bacterial infection in the udder.

Another barn at Cornell is the McConnville Barn which is part of the James A. Baker Institute for Animal Health. Here, many students work to clean the stalls, feed the animals, administer shots and medication and take blood.

“I’ve learned so much,” Appel said. “Before all this, I had never seen anything but dogs and cats; now I want to mix practice between working as a vet for dogs and cats and working with livestock animals.” Coming from Westchester County, just outside New York City, Appel confesses that she had never seen a cow before she came to Cornell. She is only one of many pre-vet students who has taken advantage of the various opportunities offered in the College of Agriculture and Life Sciences at Cornell University. She will attend the New York State College of Veterinary Medicine in the fall.

by Melanie Bloom '91
"They told us, 'You are going to get seasick, and that's fine but then you'll get over it and you'll go back ... it is frustrating because you can do ten things right and then do one thing wrong and it messes everything.

Harr was one of 48 students from around the United States who climbed aboard a 134-foot steel brigantine sailing vessel to take advantage of the Sea Semester in the fall of 1989. Sea Semester is an undergraduate program offered by the Sea Education Association (SEA) and affiliated with Cornell through the Shoals Marine Laboratory.

Unique in many ways, the program is divided into a six-week shore component and a six-week sea component. The land portion of the semester is spent at SEA's campus in Wood's Hole Massachusetts on Cape Cod, while the second half of the program is spent entirely on board one of two sailing vessels, the Westward or the Corwith Cramer.

In the shore component, students develop a background in nautical science, oceanography and marine sciences through lectures, seminar discussions, field trips and labs. Once on board the vessel for the sea component they have the chance to put those skills to use, working round-the-clock shifts with a professional staff of 10 and doing hands-on research.

"There is no other undergraduate program where you can get the practical fieldwork that you do at Sea Semester," said Harr. Scott Kelley, arts and sciences '91 said, "I wanted to find out if I liked oceanography or not." Kelley sailed on the recently constructed Corwith Cramer with Harr following a route through the Caribbean Sea.

Designed specifically for SEA, the vessel was constructed in 1987 and first set sail for Sea Semester in 1988. Six sails spread out to cover 7,800 square feet over the research sailing ship. The program's other vessel, Westward, is a 125-foot steel staysail schooner that was built as a yacht for round-the-world voyages.

Neither Harr nor Kelley had extensive sailing experience before October 1989, but experience is not a requirement for the Sea Semester. According to Harr, "There are people who are good sailors and people who have never sailed before, the whole range." Perhaps more important than practical experience is the great deal of patience, commitment and personal integrity required of students.

"It's an amazing program if you don't mind getting dirty and grimy and dealing with people all of the time, constantly, for six weeks," said Kelley. "If you love the ocean and you love sailing, then that is enough."

"For a whole six weeks at sea you are part of a small group of people, each of whom is responsible for the safety of all of those people," said Dr. John Kingsbury, Professor Emeritus of Botany at Cornell and founder of the Shoals Marine Laboratory. Kingsbury has been involved with the Sea Semester since its beginning in the early 1970s and currently serves on the Board of Trustees of SEA.

"The stress comes because what you're doing is so important," said Kelley. "You have to be responsible. If you don't tie your lines, somebody could lose their fingers."

While on the sailing vessel, the students stand watch with the ship's staff for eight hours a day, rotating on a system called the "Swedish Watch Rotation" and leaving little time for sleep. When they are not on watch, they attend two hours of class and participate in ongoing research projects. Both sailing ships are well-equipped for deep sea oceanographic research. Since they follow fairly consistent routes, the crew can gather data in the same regions year after year for scientific studies.

As part of one course, each student is responsible for an individual research project. Research ranges from organism biology, to population dynamics, geological sampling and water analyses, among other things. Kelley studied areas of high chlorophyll concentration below the surface of the ocean as part of his research.

The emphasis is clearly on learning through practical experience. "Sometimes it is frustrating because you can do ten things right and then do one thing wrong and it messes everything..."
up," said Harr. "In terms of science, I think the whole purpose of it is to learn practical oceanography and the difficulty of doing it," she commented.

The free time that the students do have is often spent peacefully watching the ocean. "There is nothing as beautiful as a sunset at sea," said Harr. She also remembers watching dolphins ride the ship's bow coming up from Honduras in the Gulf Stream. "There is definitely an opportunity to see wild marine mammals that you have never seen before," she said.

Yet, with the good times come bad. Sailing in all kinds of weather, facing gales of enormous strength and rotten food in the galley are all part of life at sea. "Things break down all of the time because of the corrosive salt water in the air and you have to fix them," said Harr. "The directions for all of the mechanical equipment were in Spanish. That was really frustrating."

But despite all the frustrations, the benefits are many. "When you have had 7,000 square feet of sails over your head it gives you a tremendous feeling of success and an awareness of your own capacity. You are accomplishing something that is not easy to accomplish," said Kingsbury.

"I cannot explain exactly what the experience was like to people," Kelley lamented, "you have to do it. You cannot have an opinion about it unless you have had the experience. There are things that are similar to it, but not the same." Kelley added, "I learned a lot about myself and about how to deal with other people."

Harr also sees the effects on her personal growth. "When you go through it, it is so intense and personal that you cannot imagine that anyone else has ever done it before," she said. "What you learn you learn forever and can apply it later. It was the hardest, most intense thing I have ever done."

Kingsbury is enthusiastic about students learning more about the sea and its ways. He pointed out that the ocean covers 70 percent of the earth's surface, and yet our basic understanding of the water and currents lags far behind our knowledge of agriculture or land. In that respect, the sea is a new frontier for learning.

In fact, many of Sea Semester's students do go on to careers in marine sciences or oceanography. For many others the ocean remains a comforting hobby. "The program is operated as a liberal arts course while it focuses on the demands of the vessel," commented Kingsbury. "Sea Semester is very happy to have people who are not biology majors come on board. There are many ways of looking at the sea." In fact, beginning last year a program with a greater emphasis on the humanities, called Maritime Semester, has been offered by Sea Semester. In the new program, students return from sea to spend two weeks on land in Nova Scotia, analyzing their experiences.

When it comes to applying for the program, students at Cornell hold the advantage of a direct link with the program through the Shoals Marine Laboratory located off the coast of Maine. Although independent of each other, the two organizations have a long history of cooperation.

When Sea Semester's founder, Corwith Cramer, first decided to take students on the Westward, Kingsbury welcomed the program with open arms. Later, Kingsbury sought accreditation of the Sea Semester in the College of Agriculture and Life Sciences, the College of Arts and Sciences and the Division of Biological Sciences. Today, Cornell is one of nine universities in the country that offers direct credit for the program. Students can even transfer their financial aid packages in most cases.

Since its beginning in 1971, over 2,000 students from more than 220 colleges and universities have sailed with the Sea Semester. Cornell boasts the highest number of participants in the program to date. "As the Sea Semester shaped into a college-level program I decided it was a program that Cornell students could really benefit from," said Kingsbury. "The philosophy and the objective is to provide another piece of a well-rounded education."
Open Channels in Puerto Rico

People take communication channels for granted much of the time. In an emergency, however, the media is the most important way for people to receive information.

The communication department conducted a survey in Puerto Rico over Winter Intersession 1990 to discover the channels of information flow during Hurricane Hugo in the fall of that year. Puerto Rican residents were asked questions such as “From whom or from what did you first hear about Hurricane Hugo?” and “How much warning did you have before Hurricane Hugo arrived?” The nine participating Cornell students were paired with University of Puerto Rico students and sent into the cities of Old San Juan and Fajardo to question the residents.

Laura Ryan '90 remarked on the friendly nature of the Puerto Ricans. “People were very receptive to us. I come from a New York background and I am used to people walking away when you try and ask them something. The people [in Puerto Rico] would stop and listen when they saw us talking to someone else,” commented Ryan.

Sandra Felthousen '88 MPS '90 said that even the people who could not speak English were willing to help. The printed surveys were available in both English and Spanish. The survey was read in both languages for the people who could not read or write. “That was a very high response rate, about ninety-five percent,” said Dr. Daniel McDonald, trip director. Results of the survey are at the data entry stage, according to Felthousen. She remarked on the diverse lifestyle and economic situations of the population sampled.

Jorge Morales MPS '90, originally from Puerto Rico, was the graduate student responsible for coordinating most of the trip. “Jorge was just wonderful,” said Kristi Holland '93, “He took care of all the arrangements.”

The Cornell students were able to obtain a cross-cultural perspective between what was reported in the states and the damage Puerto Rico actually suffered during the hurricane. “We just saw information of the hurricane on the news and in the papers when it happened. In the town square there were a lot of people who were put out of work by the hurricane and those people are still out of work,” said Ian Reichenthal.

An added benefit for the Cornell students was the social cross-cultural experience provided by the University of Puerto Rico students and staff. Ryan explained how the students all became friends, “The Puerto Rican students’ only obligation was to stay with us during the survey, but they called us, invited us out and took us all over the island.”

Dr. Jim Torres, communication professor at UPR, even provided the Cornell students with transportation for their stay and arranged sightseeing excursions for them. Reichenthal praised Dr. Torres, the UPR students and Morales, explaining how “they made the trip more than just the island.” Morales, an ex-pro surfer, took Reichenthal and other students surfing and the UPR students showed them a taste of the Old San Juan nightlife. “I would love to go back,” said Holland.

by Teri B. Kestenbaum '91

The survey was taken in San Juan, the capital of Puerto Rico, and in Fajardo.
Dine Out On
The Ag Quad

AS STUDENTS TRUDGED THROUGH the construction on the ag quad in the fall of 1989, many regarded the mud and inconvenience as a small price to pay for the building that grew from the pile of bricks and mortar on the west end of the quad. It was not the new classrooms in Academic 1 that interested students as much as the promise of a new dining hall. Ads throughout the Cornell Sun boasted of the ultimate dining experience in the newest addition to Cornell Dining. On January 15, 1990 the Trillium opened its doors.

The 415-seat dining hall is the newest that Cornell Dining has opened in approximately 20 years. Planning for the Trillium began six years ago when administrators noticed a need for an eating facility on the east end of campus. Undergraduates and graduates alike crowded the small eating places surrounding the ag school, and many travelled back and forth to central campus each day to lunch at Sage and Okenshields.

"We knew there would be plenty of business," Cathy Dove, Assistant Director of Cornell Dining, said. It was only a matter of redirecting the lunch crowd from old standbys like Sage and the Straight, and offering an appealing facility for faculty, staff, and non-board plan members.

Students, faculty and staff have flocked to the Trillium in large numbers. Seats are sometimes hard to find during peak lunch hours, but Dove expects that will change.

"People are trying it out now," she said. "It's new and unique. Once everyone is used to it, we expect the numbers will smooth out." She described this as typical of a new operation. "It's a little early to judge what the regular crowd will be like," she explained.

The Trillium opens at 7:30 AM and serves breakfast until 10:30, lunch from 11 to 2:30 PM.

"We're in the process of evaluating our hours and customer requirements," Dove said. "We will constantly monitor the demand for dining services, including dinner. If there is a customer need for additional hours, we will adjust."

In addition to the cafeteria-style dining room, the Trillium offers dining rooms for private functions, and concessioners (to be opened soon) serving bakery items, coffee, candy, etc. to go in the entryway. Dove said they hoped to offer a variety of services to satisfy as many customer whims as possible.

Students have had a number of reactions to the new dining hall. The light-colored tiles and 40-foot atrium above the tables are unlike any other place on campus. "It seems like it should be in a bigger university," said Leni Kaplan '91. "It's not as warm and cheerful as the Straight, but I like it," said Wendy Barboza '90, who travels up from the engineering quad daily for lunch.

The planners tried to create the atmosphere of a state-of-the-art eatery with the light, airy atrium, bright colors and lots of space. "We wanted an atmosphere different than our other dining units. I think we achieved that," Dove said.

The opening of the Trillium has had little impact on the business at other dining halls on campus. "Whatever impact it did have was planned," Dove said, referring to the closing of the Big Red Barn and the change at Sage Dining to serving exclusively co-op customers.

The Big Red Barn shut its doors December 15, 1989. "As plans for the Trillium developed, it became apparent the Barn would have to close," said Cleo Bash, director of Willard Straight Hall.

"We wanted to maximize Cornell Dining's opportunity since the Trillium was such a large investment," she said. The deteriorating physical condition of the Barn contributed to the decision to close. When it does re-open, it will probably not be an eating facility, Bash said. "There has been talk of a graduate student union there," she said.

The opening of the Trillium also offered a new place for cash and co-op customers to eat together. Sage Dining was the only place that offered this service, and customers there were restricted to separate dining rooms. Dining customers were notified in the fall that Sage would be co-op only, beginning this semester.

"It was difficult to run a cash and co-op operation in such cramped quarters," Dove said. "Now the Trillium fills that void and people can again find seats at Sage."

The Trillium has been a welcome addition to the ag quad, one long-awaited and greatly appreciated. "I can finally stay on co-op and eat near all my classes," exclaimed Kristy Richards '90. "We hoped it would benefit the entire campus, and as far as we can see, it has," Dove said. §

by Kris Gillispie '90
Saving Acid Lakes

by June L. Miller '91

MANY ADIRONDACK LAKES ARE crystal clear. Some people think this makes the lakes beautiful and inviting. In fact, it is a sign the lakes are deadly. Crystal clear water is a sign the lakes are devoid of life mostly because the lakes are highly acidic in nature.

Gene Likens, a former faculty member of Cornell University, became concerned about the acidic nature of streams in New Hampshire where he was working in the mid 1970s. He related his suspicions about the possibility of a problem to Carl Schofield PhD '71, Senior Research Associate in the Department of Natural Resources, who was working on some water chemistry problems in the Adirondacks related to acidity. Between the two of them, they began to get the idea there might be a problem with water acidity. Since then, Schofield and other researchers from Cornell have been looking for different ways of solving the problem of acidic lakes, so the lakes can support fish communities once more.

Initial research, which was done to help identify the problem, looked at survey data for many Adirondack lakes taken during the 30s and 40s. “The lakes had appeared to have higher pH levels historically and were supporting a variety of fish species. We surmised that something had happened between the 30s and 70s that caused this problem of acidification and loss of fish populations,” Schofield said.

“Through very intensive watershed [area around the lake] studies, we were able to identify acid precipitation as a primary source of acidic inputs to these lakes that had lost fish populations,” Schofield said. “We did some coring of lake sediments and looked historically at the record of the sediments to see what was happening to the diatoms which are also sensitive to pH as well. From that record it appeared major changes started occurring in the 30s and 40s.”

There are two major ways of dealing with the problem of acidic lakes. One is to add limestone (lime) to the water to raise the pH and bring it up to an acceptable level. Breeding fish to survive in acidic waters is the second method.

Schofield has been involved in research on the effects of adding limestone to lakes for about five years. “Limming is a mitigation tool for restoring fish populations,” Schofield said.

Two major ways of adding lime to lakes have been found. The first, direct surface liming consists of spreading the lime which is in powder form over the surface of the lake by helicopter. Not only is aerial dispersal faster, but often necessary, because many lakes cannot be reached any other way.

“Limming is generally not a good solution to the problem of maintaining fisheries or fish populations because most of the lakes in that region have very high flushing rates,” Schofield said. “This means that when you put lime in, the effect does not last very long and in some cases it only lasts a few months.”

“One of the other problems with lake liming, although it is possible to sustain fish populations like brook trout by stocking after you have raised the pH of the water, is that quite often those populations will not reproduce very successfully,” Schofield said. “This problem is in part due to the episodic reacidification that occurs in the lakes after they have been limed, caused by meltwaters in the spring. This reacidification occurs in beach areas where fish like brook trout like to spawn.”

Cornell’s researchers have often worked with researchers from other universities and countries on the problems of lake liming. Recently, for instance, due to many of the problems which have come up in surface liming, researchers have been investigating the effectiveness of the second way of adding limestone to the lakes. Cornell researchers are working closely with researchers from Syracuse University.
on this program. These researchers do a lot of the chemical analysis of water samples taken during the testing of this method called watershed liming.

In this process, “The lime was compressed into small pellets which were dropped so they would easily fall through the canopy of the trees and onto the soil, where they will dissolve. The pellets should dissolve instantly, because they should break apart, and chemical reactions will retain the calcium and the carbonate ions which are part of the lime,” said Dr. Joseph Yavitt, Research Associate in the natural resources department. “The lime should be retained in the soils for a long time. We are hoping it will be retained in the soils for 50 years, as compared to one year in the lake.”

Cornell’s first major study on the effectiveness of this form of lake liming was begun at Cornell’s Old Forge test site in the summer of 1988. After a year of testing the overall ecosystem to see what it was like before the liming, the lime was added in October 1989. “We have been monitoring the lake at three-week intervals,” Yavitt said. “We will continue for at least another year.”

“There was an immediate response by the lake. There has been water quality that is suitable for fish to live in since the liming. It has maintained that level of suitability all through the winter. We are now monitoring it to see what the effect of the meltwater is,” Yavitt said.

“We are hoping that there is enough in the surface soil that even the meltwater that contacts the surface soil as it is draining down is still going to have enough time as it passes over the surface to be neutralized,” Yavitt said.

The second way of dealing with the problem of acidic lake waters is by breeding fish which will be able to survive and reproduce in acidic waters. The type of fish most common in such experiments is the brook trout, which is both easy to work with and is the angler’s favorite. There are four different ways of developing acid-tolerant brook trout.

The first and simplest way is through a process called mass selection. “You take an open breeding population and choose those individuals who can survive in acid waters and breed them. Keep doing this for a number of generations, until you have fish which can tolerate the acid waters,” said Bernie May, director of the Cornell lab for ecological and evolutionary genetics.

The second process is called genomic manipulation. Brook trout fertilize their eggs outside the body which facilitates this process involving the alteration of the genetic material of the eggs and sperm.

After collecting eggs and sperm from the fish so they are easier to work with, radiation is applied to either the egg or sperm to cause it to lose its genetic material. “Then you fertilize the eggs. Then you can shock the eggs after the first cell division and return the organism to the diploid state,” May said.

“When you do this to one of these developing eggs you produce an instant inbred line,” May said. “Every individual you produce is completely unique, but completely homozygous for every gene.”

“The next step is to cross the inbred lines just as you would if you were making hybrid corn or hybrid tomatoes and find the combination of these inbred lines that produces the most acid tolerant fish;” May said. “Then in the future, you just keep crossing those two lines.”

The third option in fish breeding is to develop a gynogenetic synthetic strain. In brook trout, eggs retain a polar body until after they have been fertilized, then they expel it. This breeding option involves applying radiation to the sperm so that they lose their genetic material, then fertilizing the eggs.

However, in this process, immediately after the eggs are fertilized by the sperm without genetic information, the eggs are shocked so that they retain the polar body and are once again diploid. “These individuals will not be completely homozygous. This is a way of rapidly selecting for a given trait,” May said.

The final way of fish breeding is to create triploid interspecies hybrids by crossing lines such as the brown and the brook trout.

Funding is needed so the development of these new acid-tolerant fish lines may continue. “We need funds to allow us to commit to six to ten years to pull this off. There is absolutely no question in my mind that we can do it," May said. "If we default in any of the years [because of the lack of funding] then we have to go back to the beginning,” Cornell researchers, like Bernie May, are making steady but slow progress in their investigation of ways to combat the acidic lakes of the Adirondacks. What will the implementation of some of the newer methods mean to avid Adirondack sports fishers? Only time will tell. In a few years many Adirondack lakes will no longer be crystal clear, but alive.
IN A SMALL ROOM IN MORRISON Hall a dedicated group plans what some might call a miracle... “How are the pig people coming along?” Faint pig noises come from the back of the room followed by a brief report that the pig people are doing fine.

“How about the horse people?” The horse people are moving along without any trouble.

“Good to hear it. The next item on the agenda is games. Does anybody have ideas for new games this year?”

And so the brainstorming begins, marking the tenth anniversary of the “new” Student Livestock Show. “New” because the show was discontinued in 1968 after running for 57 years as the “Little International” Student Livestock Show, sponsored by the Round-Up Club. After 12 years its absence was finally noticed. In 1980 Cindy Cabral '80, revived the show and formed the Livestock Show Committee.

The show is partially funded by the College of Agriculture and Life Sciences, and it is open to everyone on campus. It consists of showmanship classes, games, a petting zoo and various agricultural booths, all arranged by volunteers.

“The show is student-run,” said Beth Wood '91, who co-chairs the 1990 committee with Kathy Jones '90. “Even though the faculty is supportive, we are not dependent on them.” In addition to guaranteeing fun, the students’ responsibilities include advertising the show, soliciting local farm and business sponsorship and preparing the participants for show day.

The 1990 committee comprises 26 students who have a variety of animal experience; some know goats, some know sheep and some have never worked with animals, but want to help. Tracy Fischer '92, this year’s secretary for the committee, has worked with dairy cows for six years. In 1989 she chaired the dairy committee, a subgroup of the show committee that supervises the care of the animals.

“I had never actually showed a dairy cow before,” said Fischer. “I did not know much about the show, so I learned by helping others with the organization part.” Fischer also taught the exhibitors how to handle the cows, which most of them had never done. As J.M. Elliot, Chairman of the Department of Animal Science, wrote in his 1987 Livestock Show program address, “The Livestock Show represents a unique opportunity and experience for the student who has never had a chance to care for and train a farm animal.”

Mark Albin '90, got his chance to work with animals in the 1989 show. “I wanted to try something I had never done before,” he said. “I come from Long Island, and you do not see a lot of livestock there.” Albin, who showed a Yorkshire pig, learned that training an animal is not an easy task. “The biggest problem was getting the pig isolated, and making him understand that I was there for a reason,” he recalled.

Pigs are controlled by a tap on the shoulder with a cane. Once in the ring, both pig and person are judged on their compatibility. The pig must be obedient and clean, and the exhibitor must make the animal as presentable as possible.

The participants choose among six

Livestock show participants have two weeks to make their animals "fit" for the showing. Here, two students clean up a dairy cow.
SHOWTIME!

species: sheep, goats, swine, horses, beef and dairy cows. Then, they have two weeks to get acquainted with their four-legged friends. During this time the students learn how to clip, bathe, groom and control their animals according to the species. The bonds formed during these short weeks can be found only in the barns.

"They get so excited. Sometimes the students stay in the barns forever," said Jones, who helped with publicity before chairing the show committee. "We really have to encourage them to go only during supervised times. It's for their safety as well as the safety of the animals."

Except for the goats, which are borrowed from a local farm, all of the animals in the show belong to Cornell. Most of the animals have little human contact before the show, which makes it both more difficult and more exciting for the exhibitors. An untamed animal always has one or two tricks, saved for the most appropriate moment.

"I was told to look impressive, and keep eye contact with the judge," said Albin, looking back on his showday experience. "There I was, looking the judge in the eye, when suddenly my pig took off to the end of the ring, and stuck his nose in the dirt." In such a situation, the judge looks for the exhibitor's ability to retain poise.

For the spectators, the showmanship classes can be amusing, but the real entertainment happens during the games. Have you ever played catch with a water balloon, or run a three-legged race? What about milking a cow into a soda bottle? The games, which are open to everyone, can often be an hilariously humbling experience. "The professors are funny," said Wood. "There are always a few that join in the games."

Other attractions are the petting zoo and the hay ride. According to Jones, "A lot of families come, and they bring their kids. They love the animals." Jones's family usually visits for the day along with some of her hometown friends.

The 1990 Livestock Show is scheduled for April 21, coinciding with the College of Veterinary Medicine's open house. "The hay ride goes between the livestock pavilion and the veterinary school," said Fischer. "We advertise for each other." Other campus groups involved with the show are the Block and Bridle Club and the Pre-vet Club. Fischer hopes to see more animal clubs represented this year. Volunteers tend to accumulate as the showdate approaches, and more people want to help.

Everyone who puts anything into the Livestock Show gets something in return. The exhibitors all get ribbons, the clubs raise money and the committee members are commended for their efforts. Fischer sees her secretary position as a good way to get involved and to meet people. "Maybe I will chair the committee next year," she said. "Secretary is the closest thing to chairing. It's a learning experience."

Wood and Jones agree that the best part of the show is all of the work that goes into planning it. "Two weeks before the show it always looks like it is not going to happen," said Wood. "And you feel like giving up, but somehow it all comes together." This year's Livestock Show is bound to be a success. Why not come and decide for yourself?

by Karen de Seve '90
The tracking of Lyme disease is of particular interest because the disease produces skin, arthritic, cardiac and neurological symptoms in infected humans. The disease is named for the town of Lyme, Connecticut where it was first discovered, in 1976. It is spread by the bite of deer ticks, *Ixodes dammini*, which are infected with the bacterium *Borrelia burgdorferi*.

A survey to obtain samples for testing for diseases in deer began four years ago and grew out of the New York State Three Disease Eradication and Certified-free Herd Program administered by the Diagnostic Laboratory. Rossiter said. The program is supported by the New York State Department of Agriculture & Markets, and tests cattle for Johne's disease, a bacterial infection of the intestinal tract. The program also tests for bluetongue, an insect-transmitted disease which can cause abortion and bovine leukosis, a viral-induced disease which infects white blood cells.

Cattle from herds which have been certified as free of these diseases can easily meet health requirements for export to other countries. However, animals from herds in which these diseases are known to be present (or in which the disease status is unknown) may not be able to meet export requirements. With the survey already in place to test for these infectious diseases, checking for the deer tick which can transmit Lyme disease was relatively easy to implement.

Deer hunters have been asked to collect any external parasites found on killed deer, along with samples of blood, fecal material and certain sections of intestinal tissue. The samples are placed in containers provided in the kits and returned to the diagnostic lab in pre-paid mailers.

Once the kits are returned to the diagnostic lab, they are tested for three diseases: Johne’s disease, bluetongue and leptospirosis, a water-borne bacterial disease that can cause abortion in cattle and acute illness in humans. The species of any ticks found on the deer are also identified at that time.

In 1989, 2,500 deer test kits were distributed to hunters by the New York State Conservation Council, county rod and gun clubs and veterinarians. Rossiter said that approximately 200 kits were returned after the 1989 deer season. She had hoped that 10 percent of the kits would be returned, but that goal was not achieved. Samples from the kits are frozen when they are returned to the lab, so that tests can be run on all of them at the same time in the spring.

In New York state, infected deer ticks have been found throughout Long Island, in parts of New York City and along the Hudson Valley. There have been no deer ticks found in Tompkins County which carried the bacterium that causes Lyme disease, said Ines Finin, a public health nurse at the Tompkins County Health Department. In 1988, four county residents (three adults and one child) were diagnosed with Lyme disease. However, each of the individuals acquired the disease outside Tompkins County, Finin said. In 1989, there were no cases of Lyme disease reported in Tompkins County.

However, according to a news release from the New York State Department of Health and the New York State Department of Environmental Conservation, “Lyme disease has reached epidemic proportions in New York state, with 2,533 cases confirmed in 1988 and 2,343 reported already this year [1989].” The report also stated that “of the four, 572 cases of Lyme disease reported to the federal Centers for Disease Control in 1988, 56 percent of them were from New York state.”

The three geographic areas having the most cases of Lyme disease are the coastal areas of the northeast, Minnesota and Wisconsin in the upper midwest,
Lyme Disease

northern California, southern Oregon, and western Nevada in the west.

Deer ticks feed on the blood of other animals from April through October. June and July are when humans are at the highest risk of exposure, because the nymphs and adults are most active at that time, and people are frequently outdoors. Deer ticks go through four distinct developmental stages over a period of two years: egg, larva, nymph, and adult.

Larva are very small, about the size of a grain of sand, and feed on the white-footed mouse in late summer and early fall. Infected nymphs develop from the larva and feed on larger mammals such as white-tailed deer and dogs. The deer then act as vectors for the pregnant adult females. Nymphs and adult ticks are primarily responsible for the transmission of the disease to humans, Rossiter said.

A circular rash with a clear center area is one early symptom of being bitten by a deer tick infected with *Borrelia burgdorferi*. Fever, headache, fatigue, stiff neck and muscle or joint pain are other early warning signs. If not treated with antibiotics, the nervous system can become affected weeks or months after the rash appears. Joint pain, difficulty in concentrating or sleeping and irritability can result at this stage. Chronic arthritis and heart abnormalities can also occur in later stages of the disease if it is not treated.

However, if the disease is discovered in its early stages, it can be treated successfully before it becomes a serious problem. If you suspect you have been infected with the disease, see a doctor immediately, especially if you have found a tick attached to your skin, or have been in an area where ticks are present.

Wearing long pants, with pant legs tucked into socks or boots, and long-sleeved shirts can help protect you from being bitten by ticks. Using a tick or insect repellent that contains the chemical DEET may be effective against the ticks. Wearing light colored clothing may make it easier to see the ticks, which are about the size of a sesame seed.

Before feeding on blood, deer ticks are black and red colored. After feeding on blood, a process which may take twelve to twenty-four hours, they become greatly engorged and may become as large as a small pea. After feeding, the deer ticks will be blue-black in color.

Checking yourself, children and pets thoroughly for ticks after returning indoors is also a good preventative measure. If you do find a tick, use tweezers to grasp the tick’s mouth as close to the skin as possible. Pull steadily and firmly until the tick lets go, and apply antiseptic to the area. Save the tick to show to your doctor—not all ticks are infected, and being bitten by one does not necessarily mean you will contract Lyme disease.

Although the deer testing program is not random or rigidly structured, it does provide information about the levels of certain diseases in the wild population. The unique aspect of the program is the voluntary cooperation of deer hunters, who have taken the time to gather samples and look for parasites on the deer they have killed.

Rossiter plans to improve the efficiency of the deer testing program for the 1990 hunting season. She hopes to achieve this by sending the kits out earlier, providing clearer instructions and including a short explanation of the program’s objectives.

New York state counties presently considered endemic for Lyme disease.

1. Ulster
2. Dutchess
3. Orange
4. Putnam
5. Westchester
6. Nassau
7. Suffolk
IMAGINE A JUICY DOUBLE CHEESE-Burger with french fries and a soda—can’t you taste it? Now picture the containers that these delectables are served in. But what happens to the plastic packaging when you’re done? It goes to the dump.

The use of convenient plastic products by the modern consumer has created numerous problems for recyclers and officials interested in saving our dwindling landfill space. Of the 150 million tons of trash produced each year in the United States, 10.5 million tons (about seven percent) is plastic. Efforts aimed at controlling the amount of plastic in landfills have included recycling and resource recovery programs as well as attempts to shift from the production of plastic to the production of degradable plastic.

According to Ellen Z. Harrison '75, Senior Extension Associate and Outreach Coordinator for the Cornell Waste Management Institute, the primary goals in waste management are to “reduce, reuse and recycle.” Consciously reducing the use of plastic and other products will help eliminate the current shortage in landfill space. In general, it is easier to control pollutants before they enter the environment than it is to clean them up later. Similarly, reusing and recycling plastic products will help curb the amount of solid waste in landfills. Harrison suggests, “Reduce. Don’t buy disposable. Don’t use more where less—or none—will do. Say ‘no thanks’ to extra packaging. Reuse. A lot of what we throw away could be used again or given to others to use. Recycle. Recycling programs are springing up all over—until plastic recycling catches up, choose paper grocery bags and glass containers.”

Degradable plastics offer another possible solution to the management of plastic waste. According to Harrison, “Under normal atmospheric reactions plastics break down very slowly or not at all.” Adding a small amount of starch can make the plastic degradable. Bacteria and fungi can then break down the plastic into dust. In light of the current shortage in landfill space, degradable plastics sound great.

Advantages to degradable plastics include benefits for corn growers as well as the agricultural industry itself. “Assuming that cornstarch could penetrate five percent of the packaging market,” according to a report issued in 1988 by the United States General Accounting Office, “the National Corn Growers Association has estimated that this use could consume more than 19 million bushels per year.” Degradable plastics are also useful in agricultural fields. As Harrison explained, black plastic sheets are sometimes spread over agricultural fields in order to warm the soil. Eventually, however, the plastic breaks up and must be removed and disposed. A degradable plastic mulching film, in this respect, would be very useful. After having warmed the soil, the film will decompose. In addition, it could reduce the number of weeds, the loss of fertilizer, the rotting of fruit, and excessive evaporation or erosion.

However, there are several problems regarding degradability. As Harrison stated, “Just how fast and under what conditions the plastic products break down to earn the name ‘degradable’ is an issue on which neither scientists nor the public has come to agreement.”

Sarah Friedell, a Communication Specialist at the Council for Solid Waste Solutions, said nothing conclusive exists regarding the development of standards and methods of testing to evaluate product performance. Definitions of terms such as biodegradable (capable of being broken down by organisms) and photodegradable (capable of being broken down by light) have not been standardized. In addition to lacking uniform definitions, degradable plastics do not accomplish any of the primary goals in waste management (reducing, reusing and recycling). According to Harrison, “It would be far more useful to develop practical methods for recycling plastics of all kinds than to make them degradable.”

Harrison confirms, “Degradable plastics may have a place, once we are convinced that they are safe and effective, but they will not solve our waste problems, and they are no substitute for waste reduction and recycling.”

So, the next time you crave a juicy double cheeseburger with french fries and a soda, take a look at that bag of trash when you’re done.

by Cindy Rosen '91
Weather Watchers Mark 100 Years of Record Keeping

The Cornell-run weather observation station in Ithaca will celebrate the 100th anniversary of the National Weather Service's network of civilian weather watchers. Dan Samelson, Cornell meteorology graduate student concerns himself with the weather-that-was. The data he records eventually may prove useful to crop experts and farmers, power companies, architects and even to other meteorologists as they try to improve the accuracy of their forecasts. The Cornell-run station is one of about 10,000 other cooperative weather observation stations throughout the United States. The National Weather Service depends on the network of civilian weather observers in hundreds of strategic locations.

Geneva Man to Head NYS Fruit Testing Association

Dale Heinzman, a Genevan who spent many years on the family's 415-acre multi-crop farm, has been named manager of the NYS Fruit Testing Cooperative Assn., Inc. (FTA). The FTA is an independent organization situated on the grounds of Cornell's Geneva Experiment Station. It was established in 1918 as a non-profit cooperative fruit nursery. Its purpose is to introduce new fruits judged worthy of trial by scientists at the Station. Most recently, Heinzman was director of financial control at the Robson Corporation in Hall, NY. "Exciting possibilities exist for broadening the activities of the FTA through increased membership and vigorous efforts to widen the audience that will receive news of new and improved fruit varieties," Heinzman said. Heinzman received a B.S. in general agriculture from Cornell in 1966.

Food Scientist Proposes New Seafood Inspection

Cornell University food scientist Joe M. Regenstein has proposed extensive, continuous testing of seafood for chemical and microbial contamination. He explained that the meat and poultry inspection system, which relies mostly on visual checks of slaughtered animals, would be ineffective for the seafood industry. "Many of the safety problems associated with seafood do not lend themselves to detection by visual checks," he said. He is an expert on fish and poultry products and a professor of food science. Regenstein said that state and federal governments should establish a seafood inspection system that would minimize the presence of government inspectors and give the seafood industry more responsibility for carrying out day-to-day quality and safety-control measures.

Buckwheat Research Project May Raise Profits

The promise of increased domestic and overseas markets for buckwheat and buckwheat products has prompted a new thrust in efforts to make the crop more profitable and attractive to New York state and other growers. Five organizations have pooled their research resources and are funding a $115,000, one-year program at Cornell University facilities in Geneva and Ithaca. The research program aims to study certain seed-producing limitations that have resulted in relatively low crop yields for buckwheat, not currently considered a major cash crop.

"It is our hope that ways can be found through research to make more consistent the percentage of seeds produced, even on the same plant," said Clifford W. Orr, a vice-president of The Birkett Mills, one of the five grant participants. "Some buckwheat blossoms are germinated and produce fruit well. But others, on the same plant, never germinated. Still others do, but they mature too quickly and fall to the ground. Once that happens, they are lost," he said. "It is generally felt that more growers would be interested in raising buckwheat if they could make more dollars per acre, and this depends almost exclusively on crop yield," Orr said.
CONGRATULATIONS ON YOUR ACCEPTANCE to the College of Agriculture and Life Sciences!

Each year, students admitted to the ag college read these words. They are neatly typed on university stationery and signed by Richard A. Church, Coordinator of Admissions.

But for the past few years, high school seniors admitted to the ag college under the early admissions plan not only received a formal congratulatory letter from the University, but also received a personal letter from an ag student.

The ag college's student ambassador organization, Ag Ambassadors, instituted the letter-writing campaign three years ago for several reasons. Because applicants accepted under the early decision option receive notification in December, they do not hear from Cornell again until the spring. The letter-writing campaign "keeps enthusiasm high," said Susan L. Miller, advisor to the Ag Ambassadors and admissions counselor.

The program also offers pre-freshmen a student's perspective of Cornell and affords them the opportunity to ask about student life. "They're [the students] bombarded with paperwork and applications, and even when they do come to visit they meet with an admissions officer," said Katrina Peck '91, chairperson of the Ag Ambassadors. The letters enable them to get a glimpse of Cornell from someone who has been in their place, she said. "It gives them a little more of a personal touch," Susan Miller said.

Often, Cornell can be an impersonal place for pre-freshmen, and they do not know what to expect from students, Peck said. "Getting to know at least one or two of the students might help to calm them down," she added. This year Peck wrote to six students from her home town. She described herself, her studies and what she likes about Cornell and Ithaca. She also invited them to ask her questions. Over the past three years, four or five students have responded to her letters.

High school students interested in the ag college will receive another new mailing, courtesy of the Ag Ambassadors, in spring '90. The new magazine will include articles written by students involved in research and extracurricular activities such as, Cornell Abroad, Cornell-in-Washington and internships. The magazine's aim is to attract students interested in research activities, because the college undertakes many research projects.

"We are trying to focus the magazine/newsletter to entice people to come to Cornell," said June Miller '91, publications chairperson of the Ag Ambassadors. The magazine will span four to six pages, she said.

"Many of the students who apply to Cornell don't realize there are so many opportunities to get involved in jobs and extracurricular activities," Susan Miller said. "Most of our science majors are leaders in their research area," she said. "These are the kids we are really trying to attract to the University," she added.

The Ag Ambassadors will publish the magazine three times a year. They will publish the first issue, concentrating on research activities, in the early spring. The second will come out in late spring for high school juniors and will include comments from ag students about life at Cornell. The Ag Ambassadors will publish the third magazine in the fall, but they have not decided on its focus. The Ag Ambassadors published a magazine featuring students' comments about Cornell life in the mid 1980s, which they sent to high school students for two years.

According to Susan Miller, students at Cornell come in contact with academic and social activities that high school students want to know about. Both the new magazine and the Ag Ambassadors' letters provide high school students with a unique opportunity to learn about Cornell through those who are experiencing it.

by Natalie Schwartz '91
Traditions

Guess Who? page 2
About the Issue

In a growing university, classes, buildings and people change. Traditions, however, create a stable ground, almost a connecting point, for past and present students. This issue of the Countryman focuses on Cornell’s great traditions, without which the “Cornell experience” could never be the same. Read about the Daily Sun, Bailey Hall speakers, senior week and more, all in this edition of the Countryman.

On the Cover:

From top of C and counterclockwise: Carl Sagan, Edwin Meese, Alex Haley, Alger His, Ralph Nader, Phyllis Schafly, Abbie Hoffman, Jeane Kirkpatrick, Cesar Chavez, Gary Hart.

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One Last Hurrah!

by Cindy Rosen ‘91

TRADITIONS—IS CORNELL LOSING them? According to Dorothy Cotton, Advisor for the Cornell University Program Board (CUPB), Cornell is in a transitional stage. New traditions will take the place of some of the old ones. Springfest is among the changing traditions of Cornell and Cotton hopes the change is for the better—that is, that this tradition will become “one that everyone in the community can be proud to participate in.”

Loud music, beer, people and Libe Slope. These are the ingredients that have, in recent years, been a part of the last day of classes—Springfest. This, however, was not the original recipe.

According to Cotton, Springfest is a “tradition that has evolved and has taken a new form.” It began as a series of events planned for the last week of classes—fun games like bobbing for apples were among those events.

Until Cotton began coordinating the plans for Springfest, along with CUPB, in 1983, there was no formal organization of the events. Originally, Cotton stated, “CUPB volunteered to do publicity for events during the last week of classes.” They acted as a sort of “clearing house.” Various organizations throughout campus which were planning events for Springfest would contact CUPB. After receiving all of this information, CUPB would create a poster advertising all the planned events.

In the past, Cornell Dining facilitated this “rite of spring,” this end of the year celebration that students clearly wanted. They decided to serve outdoor meals and to sponsor an outdoor concert.

Cotton recalls that people thought of Springfest as a “happy event,” something the students could “look forward to with happy anticipation.” But it became something different.

As more and more people began gathering on the slope, according to Cotton, more and more activities took place. Since the institution of the new drinking age in 1982, the topic of alcohol consumption grew to problematic proportions. Cotton said that some students were hurting themselves and the situation was no longer under control. Cornell Dining decided they would no longer support any celebration on the slope. The whole atmosphere seemed to suggest that the university was condoning a “drunken bash,” according to Cotton. It was obvious that the festivities needed a new focus and more organization.

In an attempt to manage the problem, a series of meetings began. According to Cotton, she started “pulling together a group of people to see how they could make it [Springfest] a positive event and still keep that festive air about it.” One of the main concerns focused on the alcohol problem. According to Cotton, one possible solution was to disallow alcohol. Taps on the beer kegs would be pulled as one method of enforcement. “It soon became clear,” Cotton explained, “that effective management was a real challenge.”

Another question raised was whether or not to have an outdoor concert. According to Cotton, some people believed that the music encouraged rough behavior while simultaneously encouraging the students to remain on the slope longer. One attempt to solve this problem, Cotton explained, was to move the band away from central campus. It became obvious, however, that students would gather on the slope anyway.

A Springfest Coordinating Committee was formally organized in 1989. This committee, Cotton said, consists of a group of students who provide leadership. The focus is on education. The committee is concerned with getting various organizations around campus to sponsor activities and competitions during Springfest. According to Cotton, these activities would hopefully detract from the amount of alcohol consumption and create an exciting and more inviting atmosphere. Springfest 1989 was an improvement upon the previous years, Cotton stated, because “the student committee took responsibility for making it better,” but it still has room for improvement. Springfest was advertised as a “happy event.” The question still remains though, according to Cotton, “How can we improve upon these positive steps?”

Clearly the tradition of Springfest has changed for the better and is continuing to do so. Cotton stated, “The hope is that new traditions will emerge and historical ones will become better and an even greater asset to the Cornell community.”

Springfest 1986—Students gathered on Libe Slope to celebrate the last day of classes.
The New Studio

by Andrea H. Retzky '91

ENTER THE NEW SPACE OF THE Landscape Architecture Program at Cornell University, located on the top floor of Academic I, and you are immediately struck by the vast, cavernous space of the brightly-lit studio. Rows and rows of desks sit beneath a high barrel-vaulted ceiling, while tall windows run the length of the studio. The large, round clerestory windows at each end create an airy sense of openness and light.

As the clean, orderly space seems to encourage productivity and learning, it is easy to understand why Ken Wing '58, MEd '60, PhD '66, the Associate Dean of the College of Agriculture and Life Sciences, is so proud of this new addition. Wing, a key participant in this project from start to finish, described the planning of the new facility.

"First, we developed a program for the space and the relationship of people within that space. This included the studio, classrooms and faculty offices. After the architects drew up the initial plans, the landscape architecture faculty suggested changes concerning spatial relations. Then the architects developed the final plans that satisfied the needs of the landscape architecture program and the ag college," Wing said.

Wing acted as a liaison between the landscape architects and the New York-based architecture firm which designed Academic I, Gwathmey Siegel Associates. "It's been a fascinating experience to see the whole story," Wing said.

Professor Peter Trowbridge, Program Coordinator of landscape architecture, was pleased by the involvement of the program in the entire planning process. "As fellow designers, Gwathmey Siegel understood our need for good studio space. Most of our needs, especially concerning space, have been met," he said.

Wing feels that the new home for the program represents a new beginning as well. "Cornell's landscape architecture program is the number one program in the country; now we have the best facility as well," he said.

The new facility includes the studio, classrooms, a computer room, gallery and faculty offices, as well as an outdoor urban horticulture research laboratory.

Trowbridge described the new facility as a "big boost" for landscape architecture. "There's been a change in morale. The new studio is inspiring; the students have more creative and fresh ideas," he said.

Looking towards the future, Wing said, "The facility will attract the very best of both students and faculty. It will give the landscape architecture pro-

The new landscape architecture studio is crowned with a high barrel-vaulted ceiling creating an airy sense of space and light.
The Associate Dean said that the entire ag college will benefit from the presence of the new building. "The facility will be receiving a lot of favorable publicity, which will in turn draw attention to the ag college and Cornell," Wing said.

In January of this year, the landscape architecture students were finally permitted to move from the decaying East Roberts Hall, now slated for demolition, to the new facility. The move was delayed for a semester while workers completed construction on the second half of Academic I. According to most students now working there, it was worth the wait.

"I'm very content," said Rob Lopane '91. "The facility is excellent; it's much more professional," he said. Hilleary Cusack '91 described the new program's best feature: "The open arrangement promotes direct interaction between every student; you can really learn a lot from the others," she said.

Trowbridge commented that the new arrangement facilitates more open relationships between students and faculty as well. "With everyone in one place, I can see more students now," he said. "There's more opportunity for serendipitous interaction."

A few graduate students noted that the open studio arrangement was less conducive to a working atmosphere. "It's more social, and it gets noisy often. It's hard to work when someone walks by every five minutes and asks, 'What's your thesis on?';" one graduate student said.

While some students describe the new facility as "homogeneous" and "sterile," most of the drawbacks cited concern specific supplies and furnishings soon to be installed. Keely Barber '91 noted that the landscape architects "need space to build models," using clay, glue, spray paint, and the like. "We don't want to trash the studio," Barber smiled, "but I'm sure we'll work it out."

Trowbridge likened the former East Roberts studio to "a pair of old shoes. They're comfortable, familiar. But adaptation to the new facility will evolve. It's a big space; it needs to be lived in," he said.

Already such adaptations are evident. Among the rows and rows of identical white lamps at each studio desk, one now sports a bright red lampshade. The landscape architects have found their new home.
WHO WOULD BELIEVE THAT ONE of the most popular courses in the College of Agriculture and Life Sciences requires students to petition for enrollment privileges? The great attraction lies in the structure, knowledge, freedom and pleasure the class offers students. The class is Floral Design.

Each class starts with a theme to practice the basic concepts of design, such as spring flowers, centerpieces, basket designs or corsages. Basic design concepts revolve around the emphasis of visual pleasure, balance, accent, correct scale, economic use of materials and appropriate placement of blooms and foliage. The students are given flowers and a container, but are allowed to select the foliage and basic line design for the arrangement.

Teaching assistant Amy Schweitzer '90 commented that, "Students are free to do what they want within the theme. Creating something is more of a personal thing than other classes." Professor Charles Fischer of the Floriculture and Ornamental Horticulture Department said, "As the students become competent and comfortable with the medium, they develop an expertise at floral design and are encouraged to add touches of originality and uniqueness to their compositions." Maria Kakoyannis '90 enjoys this chance to express herself by "doing something creative with my hands instead of sitting in a lecture."

While the chance for individual expression enhances the student's enjoyment of Floral Design, it also increases the professor's fulfillment. Even after 20 years of teaching Floral Design, Fischer still relishes the "student's individual ability and the greater freedom in teaching and satisfaction." He said that teaching the students to develop the skill of using flowers and foliage in an established design and improving from week to week is a fulfilling teaching experience. "It is rewarding to see how the students acquire the basics and how they comfortably develop the techniques of design."

Perhaps this is one reason more students preregister for Floral Design than can be accepted. "We require students to fill out a department application," Fischer said. The application asks students questions such as, "How will this expertise help with your future career?" Patti Pakkala '90, a landscape architecture major mentioned, "The class offers us another form of [expression to] design with plants." Communication major, Beth Nielsen '90, said, "The class helps me visualize color coordination, space and balance." These concepts are important contributions to many of her visual communication projects.

Horticulture, communication, fine art, design and plant science majors have priority for enrollment. Fischer explained, "Design majors get the opportunity to express design outside of a specific area. Fine arts students can express and develop other facets of art."

An added benefit the class offers is a welcome break from Cornell stress.

"Sometimes people get upset about grades and they shouldn't—this class is not for stress, so hopefully everyone looks forward to it," said teaching assistant Nora Hartsough '90. Nielsen said, "It is so relaxing to listen to music, arrange flowers and wind down. What's even better is that we have something to take home and look at. It is a very worthwhile class." And best of all, as Pakkala said, "It's a nice break from the normal Cornell scene."

All in all, the floral design course is a great success. Fischer mentioned that this does not surprise him. "I get students in class whose parents took the class years ago. This is possible since floral design classes were introduced at Cornell in 1900 as the first study of its type in the country. "It has great significance to me," said Fischer, referring to the history of the class. "Cornell is renowned for the originality of so many things. This class is simply a continuation of the origin with updating, to keep it contemporary with materials and styles." Evidently, the updating is working. Floral Design classes have been popular for 90 years and will probably stay that way for many years to come.

by Teri B. Kestenbaum '91
Weather On Line

AS YOU LOOK OUT THE WINDOW on a blustery January day, you wonder if the snow is going to continue or if it is going to clear during the day. You have to travel out of town and need to know the weather conditions. If the road conditions are not suitable to drive, your trip will be canceled. To your dismay, you just missed the weather report on the radio and television. Rather than waiting for the next report, you call the Cornell weather phone.

The weather phone is a student-run weather information station which services the Cornell campus and the Ithaca area. The students who operate the weather phone belong to the Cornell Chapter of the American Meteorology Society (CCAMS).

"The weather phone has been in operation since the early '70s and has been kept up to date by the students who do the forecasts," said Professor Warren W. Knapp, professor of meteorology. The weather phone gives students an opportunity to put their knowledge to work and provides experience in the field. "You learn because you do your own forecasts," said Alice Ting '90, meteorology major. To forecast the weather, students use information from the National Weather Service Observation Network, radar, upper air and computer generated forecasts, according to Ting.

Currently, there are 20 to 25 students in the club. Most are meteorology majors but four are non-majors. The only prerequisite for being a member of CCAMS is an interest in the weather. "We teach the students everything they need to know to do their own forecasts," said Mark Wysocki, faculty advisor for CCAMS. "They are given forecasting technique lectures to encourage them to look at the information we have available."

According to Wysocki, the weather phone gets students actively involved in forecasting. "You can see trends easier when you watch data come in. You get a better feel for the atmosphere and become a better forecaster," he said.

The club is part of the Meteorology Unit of the Department of Agronomy. The department also has two other major components—soil science and crop science. "Meteorology seems to attract the most undergraduate students with about 30 to 40 majors," Knapp explained. "And the weather phone is a popular feature within the major."

Students operate the weather phone in Bradfield Hall, where the meteorology unit is located. Forecasts are updated twice a day—once in the morning and once at night. "It's important that people have updated forecasts," Ting said. When you call in, you will hear a recording of the current weather conditions as well as an extended forecast.

In addition to weather conditions, weather advisory reports are given in bad weather. During the winter, we get up to 100 calls a day," Ting said. Another added feature offered by the weather phone is a traveling advisory. Before vacation breaks, the weather phone gives traveling information. For example, if you are headed to New York City or Chicago, weather forecasts are available for those areas.

Aside from operating the weather phone, the Cornell Chapter of the American Meteorology Society serves other functions. The club provides an opportunity for students to meet each other and the faculty within the field. "Every month we have a pizza party where everyone can get together and talk," Wysocki said. "It's a great way to meet everyone, and because the group is so small we're like a family," Ting explained.

In addition, the group has bi-weekly meetings to discuss field-related topics. "We have guest speakers from the National Weather Service and faculty members from both the department and other universities come in to talk to the group," Wysocki said.

During these meetings, possible careers are presented. People from the Cornell Career Center discuss the opportunities available to meteorology majors. "In addition, we set up field trips so students can see the actual working conditions of a possible future employer," Wysocki said. "We feel it is part of our job not only to teach the students but also to help them find a job."

A common misconception faced by meteorology majors is that people often associate forecasting with radio or television. However, there are many other opportunities available. Private businesses, for example, often need meteorologists to keep detailed weather reports for them. "It's more of a challenge to deal with these types of clients since they want more specifics," Wysocki said.

The weather phone was originally established as a one-line answering machine. Currently, the system has switched to Audix, a telecommunications service of Cornell. "You could described it as a giant answering machine, since it can handle up to 19 incoming calls," Knapp said. So, the next time you need to know the weather conditions in Ithaca or an extended forecast of the area, remember the Cornell weather phone. Call the 24 hour phone line at (607) 255-6567, and that way you won't be surprised when you are snowed in for the day.

by Laura M. Glazier '90
"Black lie the hills; swiftly doth day
dataight flee;
And, catching gleams of sunset's dying
smile
Through the dusk land for many a
changing mile
The river runneth softly to the sea.”
—from Land-Locked
by Celia Thaxter

WHILE GROWING UP ON THE ISLES
of Shoals, Celia Thaxter penned many
verses capturing their rich, natural
beauty. Almost three quarters of a century
after her death, Cornell University
began offering undergraduate courses
in marine biology on the Shoals, a clus-
ter of islands off the New England
coast. Soon, Shoals Marine Laboratory
(SML) was constructed on Appledore
Island and has been drawing students
from Cornell and other major universi-
ties ever since.

In the summer of 1990, SML will
proudly celebrate a special anniversary.
It has been offering students the oppor-
tunity to study marine science in a na-
tural environment for 25 years. “It’s the
perfect place to conduct research and
study marine science, because it’s so
untouched,” said Christine Bogdanowicz,
program coordinator for SML.

“It’s a very pristine and nutrient rich
environment.” Although SML is primarily
an undergraduate teaching facility,
faculty members have been conducting
research on the island for the past
several years.

Every summer Dr. John B. Heiser,
director of SML, and Dr. Ric Martini,
SML core faculty member, collect, ob-
serve and photograph Atlantic hagfish.
Little is known about the behavior and
natural history of these eel-like, jawless
vertebrates. Heiser and Martini gather
the hagfish with a “garbage can” trap
containing the hagfish’s favorite meal:
dead, decaying fish. They deploy the
garbage can trap over the side of the

John M. Kingsbury, SML’s 47-foot re-
search vessel, and retrieve it 30 minutes
later. The hagfish are transferred to a
bucket of sea water and then to an ob-
ervation tank. Recently, a cold room
called the “Haggie Hilton” was built at
SML to house the hagfish. The “hotel”
serves as a simulated natural environ-
ment for the hagfish.

Students in the Marine Vertebrates
class participated in the process. “It was
really a worthwhile experience to be in-
volved with research that hasn’t been
done before,” said Peggy Hellenbach
’90. “It was to get some hands-on
experience in what they were doing
and how they were doing it,” she
added.

Meanwhile, students and faculty are
studying the mysterious appearance of
Codium, a marine alga which inhabits
the waters surrounding Appledore
Island. Dr. Jeffrey S. Prince, marine botan-
ist and SML core faculty member, and
his Field Marine Science students dis-
covered an increase in the Codium
population through underwater observ-
ations over the past several summers,
according to The Appledore Times
(Winter 1989), the SML newsletter.
Through laboratory experiments and
field observation, Prince hopes to de-
termine why the amount of Codium is
increasing while that of kelp, a more
desirable and native type of alga, is
decreasing, according to Bogdanowicz.

Codium’s reproduction process has
also been the subject of research. Codi-
um along the northeast Atlantic coast is
known to reproduce asexually. Howev-
er, in 1988, Prince reported in the Jour-
nal of Phycology that the Codium
population off Appledore Island was
reproducing sexually and is investigat-
ning this unusual phenomenon.

Hagfish and Codium are not the only
creatures receiving attention from
SML’s faculty. Jon Witman, marine ecolog-
ist and SML faculty member, has
been studying the distribution patterns
of sedentary invertebrates such as
sponges, anemones and bryozoans in
the rocky habitats of the deep undersea
communities throughout the Gulf of
Maine. Witman and his colleagues plan
to set up two environmental monitor-

A foggy morning at the Isles of Shoals.
ing stations. They hope the data collected will determine the winter behavior patterns of the benthic (sea bottom dwelling) organisms and the effects of winter storms on the species, according to The Appledore Times (Fall 1988).

While some SML faculty study the island's marine life, Faith Harrington, marine archaeologist and SML core faculty member, has been conducting archaeological explorations each summer for the past several years to trace the history of the islands.

SML's students have even become the subjects of experimentation themselves. Each summer, students experience first hand the difficulties that organisms encounter when orienting themselves to their environment. Jerry Waidvogel, behavioral ecologist and SML core faculty member, devised a field demonstration a few years ago to show students the problems that marine organisms have when relying on their sense of direction. He decided to test whether blindfolded students could accurately determine the direction and distance back to the Appledore dock while aboard the R/V Kingsbury. He played music to drown out the sound of the waves as well. Without sights and sounds the students became disoriented and were unable to accomplish their task.

Thus, the SML faculty has been quite busy conducting various research projects. But, as always, the students have been involved in their own research. For the past 25 years, students in the Field Marine Science course have been conducting transect studies of the island's marine life. The students quantify the organisms and determine their distribution in the intertidal zone. They design the research project, collect and present the data. SML plans to compile the studies spanning 25 years, according to Bogdanowicz.

Though the island serves as an ideal environment to study and research marine life, it also offers its inhabitants peaceful, natural living. "It's the best place in the world if you want to get away from civilization and into a natural environment," Hellenbach said. Kate Reynolds '90 also enjoyed the island's calming atmosphere. "You can go for a five minute walk and stare at the ocean for half an hour and nobody's going to bother you, except for a seagull."

"You really do feel like you are in another world when you are out there," Bogdanowicz said. Such an exquisite place, alive with study, research and tranquil living, deserves a grand 25th anniversary celebration. And the SML staff have such a celebration in mind. "We're kicking it off with a special issue of The Appledore Times," Bogdanowicz said. And on April 19, 1990 the Willard Straight Hall dining room served tasty seafood dishes during "Shoals Night."

Coincidentally, Yale University in New Haven, the Smithsonian Institution in Washington D.C., and The Denver Art Museum will exhibit the work of Childe Hassam, an American impressionist who captured Appledore Island in many of his paintings. SML hopes to sponsor a reception at the Smithsonian and at Yale, Bogdanowicz said.

The highlight of the festivities will be a tall ships regatta at the Shoals, featuring S.E.A.'s (Sea Education Association) fleet, the Westward and the Corwith Cramer. In addition, SML will hold alumni reunions in July and August 1990.

The small island community on Appledore has flourished during the past 25 years. SML has fostered undergraduate study, research projects and a close-knit community environment. This summer, almost a century after Celia Thaxter's death, SML will pay tribute to the island she called home.

by Natalie Schwartz '91
The Science of Teaching

Susan West '90 and Cosmo Alpern on an Ithaca Youth Bureau summer trip to Robert Treman State Park where they went hiking.

"ALMOST EVERY DAY SOMEONE ASKS me why I'm studying to be a teacher at Cornell, and then they turn around and complain about our failing educational system and lack of qualified teachers," explained Beth Fox '90, a member of Cornell's Teacher Education in Science and Mathematics program. "I decided to be a teacher when I came to Cornell, because I wanted to challenge myself, so that I could in turn challenge my students," Fox continued.

According to Professor William Carlsen, program coordinator, students studying in the program have been supported financially since 1987 by Cornell University and the Andrew Mellon Foundation.

There are currently 35 students involved in the three year program, which begins in their junior year and continues until they receive their masters degree in education.

"There are three aspects of our program which deviate from mainstream education degrees. First of all, ours is specific to science and mathematics. All of our faculty are primarily interested in the issues involved in teaching science and math," Carlsen explained. Another way it differs from other programs is that it spans both undergraduate and graduate teacher education.

In their junior and senior years, students must complete a major in mathematics or one of the sciences while concurrently studying education. In the fifth year, students must take at least 15 credit hours of courses in mathematics and the sciences, as well as student teach and participate in education courses.

Finally, the students must complete several field work programs, including working with children at different levels of development, tutoring, observing in schools, and student teaching. "The students are spending one to two years becoming familiar with the culture of schools, rather than being thrown directly into the system," Carlsen added.

One of the requirements of the program is that participants work with children whose backgrounds are different than their own. Last summer, Fox worked at a 4-H camp in the Ithaca area. She said that she "had never encountered a tougher job, mentally. Working with people and children from different socio-economic backgrounds and cultures was really an eye-opening experience." Fox explained that she was scared at first, but extending herself beyond what she had done in the past was extremely rewarding.

Susan West '90, a general biology major and student in the program, worked at the Ithaca Youth Bureau last summer. She found, as Fox did, that the program has changed her way of thinking. West said, "I realized while working with other children that so many different things are going on in their lives. As a teacher you have to remember that there are other aspects of the students' lives influencing their behavior. This summer we were forced to look at the positive qualities in a situation, and I think this is especially important in teaching."

Carlsen said that he hopes a few of the students will remain in the Ithaca area to keep them involved with the program. He is optimistic that the students will remain teachers for an extended period of time. "A common experience of graduates from teacher education programs at prestigious universities is that they stay in the classroom a few years, then move on to graduate school, administration, and other fields," Carlsen said.

"The field of teaching is changing so much now, that we hope our students will be able to get involved with programs where they are encouraged to continue growing and learning while still teaching," Carlsen explained. Currently programs exist in which teachers are able to teach part of the day and spend the other part working with other teachers, returning to school, or becoming involved with school governance.

The eight faculty in the program, who come from the Departments of Education and Mathematics, will bring students back to Cornell one year after they graduate. "We want to encourage the students to continue learning and let them know we are still here for them," Carlsen added.

The program also sends many of its students to Shoals Marine Laboratory, jointly operated by Cornell University and the University of New Hampshire, off the coast of Maine. At Shoals, students are able to take a six credit graduate level course, Adaptations of Marine Organisms, immediately prior to student teaching.

Because the program is only three years old, the students and faculty are anxious to see what lies ahead. However, the success of the students' involvement is already evident. As West explained, "Teachers have a big responsibility. It's the quality of the education that counts. Not only do we need teachers who know the material, but they must be aware of whether their students understand it or not. Kids need to learn to think and understand, and not just to get by."

"This program has an excellent philosophy: I don't think schools are working as they are now, but I'm impressed with the educational reforms taking place in certain school systems and hope to be a part of that when I graduate," concluded West.
The Risks of Business

by Kris Gillispie '90

WHEN NAT WASSERSTEIN '90 FIRST dreamt of starting an organization to pool the energy, ability and ideas of student entrepreneurs, he had no idea it would take off so quickly. Less than a year since its conception, Cornell Entrepreneurs has 100 members and has launched six small businesses.

"We serve as a resource base for the student entrepreneur," Wasserstein said. "These are the students who are willing to step out of the crowd. When you get all that energy and talent together, the results can be explosive."

Students have already tapped several lucrative markets in the Ithaca community through their work in Cornell Entrepreneurs. One group began Big Red Cleaning, a housecleaning service that has a steady share of returning customers. Another started a futon frame making business that has grown immensely since it began last year. Other groups sell t-shirts, lamps and calendars to turn a profit.

"Cornell Entrepreneurs is an active, independent group with a lot of energy," said Prof. Bruce Anderson, agricultural economics, one of the group's faculty advisors. The organization is headed by Wasserstein, an agricultural economics major, and Rod Agona '90, a computer science major. David Benden, the Don and Margi Berens Professor of Entrepreneurship in the Johnson Graduate School of Management, Michael Hudson, director of the Personal Enterprise Program in the ag college and lecturer Dale Grossman also advise the group.

Biweekly meetings are used to brainstorm ideas for new businesses. Members are open to hearing any ideas; nothing is too wild or crazy. "We've heard them all," Wasserstein said, "even an idea to market quality breakfast cereal prizes."

Members evaluate the potential of a given idea in an open discussion that often gets heated as everyone gives their advice. If the idea attracts enough support, an ad hoc committee forms to investigate the feasibility of the proposed idea. The number of ad hoc committees at any given time is only limited by the membership. "If there is enough support, we'll look into ten ideas at once," Wasserstein said.

The ad hoc committee reports back to the group at the next meeting. They indicate whether it is worth pursuing further, and what pitfalls or obstacles there may be to overcome. At that time, a formal project committee begins, and students have the chance to back the venture.

A project manager is chosen to coordinate operations, and interested members become partners in the project. Only formal participants are eligible to share in the proceeds from the business. A member may invest as much as $1,000 in a new business, although the figures are usually closer to $50, Wasserstein said.

Starting funds typically come out of the students' pockets, but money is available through other sources, he said. Students may also submit a business plan to solicit money from a bank or the Student Venture Fund, a fund established by alumni and faculty to foster entrepreneurial efforts of Cornell students. The fund is managed by Student Agencies and an advisory board of prominent alumni. Cornell Entrepreneurs itself is funded in part by the Student Finance Commission.

"We try to encourage members to look beyond the financial aspects and see if the idea works," Wasserstein said. "If it's a good idea, there's usually a way to do it." Problems come when studies conflict with business, and students simply cannot find the time necessary to get an idea off the ground.

"We have a guy who has tapped such a big market in futon frames, but he just hasn't got the time to meet the demand that's there," he said.

Wasserstein's own idea is a grocery delivery service that he hopes to see in operation before his graduation in May 1990. A market survey indicated a strong interest among students who haven't the free time to do their grocery shopping each week.

"Students pay to have their food delivered, their laundry cleaned, even their notes taken for them," Wasserstein said. "Why wouldn't they pay to have their groceries delivered too?" Students apparently would. Local Ithacans also showed interest, particularly people in retirement homes. Comments on the initial survey showed they would be willing to pay 15 percent of the grocery bill for delivery.

Wasserstein approached the management at Wegmans with his idea, and the response was overwhelmingly positive, he said.

Students from the ag college dominate in numbers in the group, a fact that Wasserstein attributes to the backgrounds and goals of ag students. Many come from farms and other family businesses, so they see the potential in small business ventures, he said. Others look at campus groups as places to make a little money and beef up their resumes, but ag students often see beyond that. "They are the ones who raise their hands in business management classes and say that an idea could never work in a million years, and they know from experience," he explained.

The organization is trying to attract more members from other colleges, so it can become more firmly entrenched in the University. Wasserstein is also trying to establish a University-wide board of directors. "Our advisors have given us an amazing amount of support, and the more support we have in different areas of the University, the stronger we'll be," he said, adding that he wants to see the organization strong enough to stand on its own by the time he graduates. He plans to attend business school in the fall.

Anderson sees great potential in Cornell Entrepreneurs. "Nat has given it a lot of needed leadership to get it off the ground," he said. "If we get more leaders in the younger classes who are willing to put in the same amount of time and energy, I can see it going for years to come."
EVERYBODY HAS HEARD THE PHRASE
"No news is good news." Members of the Cornell community also understand that sometimes the news is not really news at all. The community has sometimes been fooled by fake issues of the Cornell Daily Sun, which although they look real, are really just jokes.

The first surprise came in 1909, when Cornell awoke one morning to find that President Taft had visited an exhibit at the College of Agriculture and Life Sciences. However, the Sun did not make fooling people an annual prank until the 1930s.

Bogus issues of the Cornell Daily Sun appeared most often on the Fridays before Fall Weekends, when many fraternities would have parties. Yet over the years, they have marked other traditionally special weekends, such as Spring Weekend and Junior Weekend in February.

Sometimes, the joke issue headlines were obviously false. Other times, "The staff of the Sun would start with something that just might be true and push it to a logical extreme," said John Schroeder '74, associate editor of the Sun from 1973-1974. "Sometimes the joke issue would be a parody of some other publication, like the New York Daily News."

Most of the joke issue headlines dealt with a topic of some controversy occurring on campus. On November 12, 1976, the headline claimed "Four buildings to be leveled." The map underneath showed Phillips, Rand, Roberts, and Rockefeller halls were going to be demolished because of a new $5 million maintenance program. On November 20, 1980, the headline read "Dorms will be coed next spring." The story said women in Balch Hall and Baker Tower would be chosen at random to move to Mennen and Boldt halls in January, so there would be room to move men into their places.

Early joke issues often only had a fake front page, with the real front page on page three. "One time they put the front page on upside down," Schroeder said. The early joke issues were often hard to discern, but as time progressed the issues became total fakes. "All of the stories were fake, some of the advertisements were fake, and some of the personal stories were faked," Jeremy Kaplan '88, managing editor of the Sun from 1987-1988.

The last joke issue produced appeared on March 10, 1987 and reported the Sun had merged with the Cornell Chronicle. It also said that Cornell was to begin drug testing for all students. It listed the times and places for the testing which caused many students to report to a "testing site."

The fact that the community responded to the joke issue was one reason it was discontinued. Kaplan, a member of the Sun editorial board which decided not to print a joke issue, listed three main reasons for discontinuing these issues.

"The first was that we took the newspaper very seriously. We knew most students got their news from the Sun," Kaplan said. "We felt that [by] messing around with the paper, we were saying we didn't care whether or not the students got the news which had happened on that day."

The second reason was that frequently the individual biases of Sun staff members would be revealed in the joke issue. The third was that the jokes could provoke serious consequences, as in March 1987, when the joke issue proclaimed that Cornell was planning to disband all fraternities.

"A couple of weeks after that, John Burness, vice president for university relations, got a call from some guy on the west coast who wanted to know why Cornell had banned all frats," Kaplan said.

Despite the fact the joke issue sometimes had a bad effect on its readers, the staff of the Sun enjoyed making the issues up. The Sun editors and reporters who were working on the issues would even keep a secret from other members of the Sun. The conspirators would start with ideas a couple of weeks before the planned publication date, but they would do almost all the work on the issue the night before, in typical Sun fashion. "Part of the fun was that after being careful the rest of the year, you could have fun and still be commenting on news stories," Schroeder said.

Even two years after the last joke issue appeared on campus, the idea is still thrown around by members of the Daily Sun. But in the fall of 1989, Sun pranksters found another way to let loose when they decided to mimic the Yale Daily News.

The Yale prank issue was the fourth
such copy produced by the Sun. Other college newspapers that the Sun has emulated are the Syracuse Daily Orange in 1955, the Harvard Crimson in 1959, and the Daily Princetonian in 1965. One of this year’s pranksters was Jeremy Schaap ’91, former sports editor and son of Dick Schaap ’55 who was part of the original Syracuse Daily Orange spoof.

The Yale Daily News prank was the brainchild of Saman Zia-Zarifi ’90, the former associate editor of the Daily Sun. He came up with the idea while visiting a friend at Dartmouth in April of 1989. “The night I was there, some of the fraternity guys pulled a prank,” Zia-Zarifi said. “We all started talking about how it used to be funny because there were all these great traditions when universities played each other.”

He came back thinking that when Cornell played Dartmouth in the fall of 1989, they would go there and do something. He came back and started talking to Schaap about the idea. “Since it was Jeremy, the obvious answer was to swap their newspaper,” said Zia-Zarifi.

But the problem was that the Sun is one of the best college newspapers in the country and The Dartmouth is not very good. The plotters at the Sun felt it would be mean to fake their paper.

After taking time to consider the other possible candidates, the plotters decided on the Yale Daily News. “The Yale Daily News is the only collegiate daily that’s older than the Daily Sun. It’s older by a semester and they tout it,” Zia-Zarifi said. “It’s on their masthead: ‘Oldest college daily.’” Also, the Cornell-Yale football game was at Yale in November of 1989, offering the perfect opportunity for such a prank.

The planning stages of the prank issue started and continued until October when its planners realized it was time to get serious. Zia-Zarifi went on a scouting mission to the Yale Daily News in October under the guise that the Sun was thinking about changing to a broadsheet form (a larger style), from the current tabloid style.

The pranksters eventually got serious and for a week they worked on the Yale issue all the time. “We did not want many people to know about it, so we would wait until after the Sun was put to bed at three in the morning and then we would just work on [the parody] until breakfast. Then we would eat breakfast at the State Diner and go to classes,” Zia-Zarifi said.

The fake issue of the Yale Daily News was finished early the week of October 22, 1989 and taken to Pennsylvania to be printed, because the type and size could not be matched here. On Thursday, November 4, after receiving a phone call from fellow pranksters who had successfully completed a scouting run of the Yale Daily News’ distribution system, Zia-Zarifi left Cornell with the fake papers.

One of the more unusual joke issues which was published changed the name of the paper.

Early the next morning, the pranksters switched the Sun papers with the real Yale papers on the loading dock of the New Haven Register where the Yale Daily News is printed. After being picked up and taken to Yale Station to be stamped with addresses and put into students’ mailboxes, the hoax was discovered.

“We were standing in Yale Station and I saw the Editor-in-Chief run in, open his mailbox and there was a copy of the fake paper. He was furious,” Zia-Zarifi said.

About 11:30 that morning Zia-Zarifi called the Yale Daily News to say they would stop by and return the real papers. When they arrived they found the editors were still very upset and had even called Ellen Braitman ’90 then Editor-in-Chief of the Daily Sun.

“It turned out that the day we had picked was the day of the annual Yale Daily News banquet. It’s a very formal affair, alumni come back and everything,” Zia-Zarifi said. “We had just picked the worst day to do this.”

Although the staff of the Yale Daily News was not amused, the rest of the Yale campus found the papers funny. Some people think joke and prank issues are a good way to release tension.

“I think the administration and the community really like the joke issues that the Sun put out,” Zia-Zarifi said. “I have always felt the Sun should put them out,” Schroeder said. “It’s just one more tradition at Cornell that has died.”

However, there may be hope for the future of such pranks, because the new Sun editorial board is just beginning their tenure. They may decide that the Cornell community needs a way to be a little less serious and laugh at itself a bit. What better way to laugh than by reading news that is not necessarily the news? ■
Holey Corn Cobs
by Michele Pepe '91

CORNELL UNIVERSITY IS SEEKING a patent on a food processing technique that keeps frozen corn-on-the-cob fresh and palatable. How? A hole is drilled lengthwise through the center of an ear of corn. Ingenious? You bet.

"It takes only three to four minutes of cooking to maintain fresh corn's sweetness and tender texture—if you eat it right away," said Chang Y. Lee, founder of the technique and professor of food science and technology at Cornell's Agricultural Experiment Station in Geneva, New York. "But frozen corn-on-the-cob develops a cardboard-like, earthy smell after about six months, because it's blanched (cooked) for less than four or five minutes before freezing. While this is enough time to cook the corn, it's not enough to deactivate the natural enzymes that reactivate over time and cause a stale, rancid flavor."

Lee was in the process of studying the chemistry of these natural enzymes in corn when he discovered the technique. He found that the enzymes responsible for the displeasing taste in reheated corn are called peroxidase and lipoxygenase, and that they are located primarily on and around the corn cob.

"Frozen-food processors," Lee explained, "cut the corn by machine and then boil or steam it for 12 to 15 minutes. This blanching period cooks the corn from the outside in and eliminates the cardboard-like flavor by inactivating the enzymes. It also enables the corn to remain frozen for seven or eight months before the consumer actually buys it. But cooking for that long makes the corn soggy. So in controlling flavor, we create an undesirable texture."

The food scientist theorized that by drilling holes through the length of corn ears, the corn could be cooked from outside in to inside-out simultaneously. This "dual" cooking procedure would cut the blanching time in half and provide more effective heat, thereby preserving the corn's texture and at the same time deactivating the unsavory enzymes.

In the course of his work, Lee periodically assembled taste-test panels. "I used 15 to 20 employees who were very sensitive to the taste of certain foods, and asked them to compare drilled corn with undrilled corn," Lee said. The taste tests revealed that the texture of drilled-ear corn (which had been cooked for a shorter amount of time) was indeed closest to that of fresh corn.

"Except for better texture," Lee added, "there is not much difference in quality from drilling holes in the ears. Where we have succeeded is in improving processing techniques for frozen, sweet corn-on-the-cob by cutting the blanching time in half."

Without a corn-cob driller in his food science lab at Geneva, Lee used a machine shop drill press. He pointed out that drilling holes in all the corn cobs should pose no difficulty, however, for commercial food processors. Lee is currently working with Comstock Foods, a Rochester, New York food processor.

The desire for a patent for this process was announced on July 11, 1989, at the International Conference on Technical Innovations in Freezing and Refrigeration of Fruits and Vegetables, in Davis, California. "But we're still in the midst of arguing it out," said Lee.

Lee commented that the new technique could mean potentially more than just improving the texture of frozen corn-on-the-cob. "Energy is a big issue these days," he pointed out. "If we're ever faced with another energy crisis, the halving of blanching times will conserve a drastic amount of energy."

Lee also said that the effect of shortened blanching times on the nutritional content of corn-on-the-cob, is a factor that has not yet been considered, but one that might yield pleasing results.

"Any extensive cooking of vegetables detracts from their nutritional value," he explained. The rapid cooking accommodated by the drilling of holes may also mean that the corn retains more of its nutrients. "But that remains to be seen," Lee added.

Whether or not this turns out to be the case, Lee's innovative idea will benefit consumers. The food scientist summed it up best when he said that "Consumers will be able to have frozen corn all year round without sacrificing crisp texture and sweet, garden-fresh flavor."
THE TEMPERATURE WAS STILL BELOW ZERO because the sun had just risen. Andy's breath cut through the cold air as he got out of his car and headed for the barn. As his footsteps crunched across the frozen grass he heard anxious whinnies from inside the barn. Breakfast is always served at six a.m.

By seven-thirty the stalls are clean and the horses are comfortable. It is time for the other part of Andy's day to begin. Little puffs of breath trail behind as he walks back to his car like the Little Engine that Could; nothing stops him.

For Andy Roberts '91, perseverance is the key to successfully balancing a Cornell education and the responsibility of owning and training racehorses. Roberts transferred to Cornell's College of Agriculture and Life Sciences from Seton Hall College in the fall of 1988. In the fall of 1990, after only three years of undergraduate study, Roberts will attend The Ohio State University College of Veterinary Medicine. How does he do it?

"Bedtime comes early," he said. "About nine o'clock. The alarm goes off at five." After finishing his barn chores, Roberts commutes from Trumansburg, New York, to Ithaca in time for his morning classes. His afternoons are filled with research that he conducts under Dr. Harold Hintz of the New York State College of Veterinary Medicine. "Depending on the day and the workload, I usually get back to the barn by four o'clock," said Roberts.

Waiting for his return are Rainfield and Beach Beauty, two standardbred horses trained in harness racing. Eleven-year-old Rainfield has been retired from racing for five years. His six-year-old companion, Beach Beauty, is Roberts' up-and-coming star. "She has the speed to do well," said Roberts, who has owned Beach Beauty for only one year.

According to Roberts the young mare had previously developed some nervous habits that interfere with her racing. "She's got a good temper, but when you get going fast everything bothers her," said Roberts. Beach Beauty also has a history of surgeries that kept her from racing from the ages of two years to five years.

So, Roberts does not push her too hard. He even withdrew from one race because Beach Beauty had a sore on her lip; he does not want her to have a bad experience in her first races. "In one schooling race she got too worked-up, and I had to start retraining her from scratch," said Roberts.

Roberts once started from scratch himself. His family owned a racing stable until the spring of 1989. Roberts worked as a groom at the family stable in New Jersey until he became a licensed standardbred trainer at age 16. For him, this achievement was better than getting a car license. He has worked as an assistant trainer for two stakes horse trainers in New Jersey, and also for Micky McNichol, one of the nation's leading standardbred trainers.

In the summer of 1988, Roberts decided he wanted to become a veterinarian, after working at a standardbred veterinary practice. "I saw what I could have capabilities of doing," said Roberts. "I'd like to practice in New Jersey because I'm licensed to train there, and it's an excellent racing area."

But Roberts must first finish his work at Cornell before he starts thinking about setting up a veterinary practice. Roberts conducts research on the relationships between energy availability and performance of endurance horses. He works with Dr. Laurie Lawrence, a visiting professor from the University of Illinois, and Dr. Harold Hintz.

According to Hintz, the practical experience with horses that Roberts brought to Cornell has helped many projects that he has worked on here. "He's very enthusiastic about his research and his work with horses, and has added much to our program," Hintz said.

"It's difficult to go to Cornell and work two horses," said Roberts. In the summer of 1990 he also plans to train two of his research horses that he calls "racing escapees," and take them back to the races. "Hopefully I'll only have two horses when I move to Ohio. It will be hard to have more at vet school," Roberts said.

In addition to the time commitment, a drawback of going to college is that it keeps Roberts in the northern states. Most trainers move south to Florida or North Carolina during the winter, and relocate in the north for the summer racing season. "Winters in Ithaca are brutal," said Roberts. The weather often interrupts his seven-day training schedule. Roberts said he loses a lot of time on the track because of icy conditions.

However, neither the weather, nor a busy schedule is enough to stop Roberts from reaching his goals. He plans to race Beach Beauty at the Pocatello Downs in Pennsylvania during the 1990 racing season. "Things are coming together," said Roberts. "She just has to gain confidence, and I'm not going to give up."

A week after this interview, Roberts' barn in Trumansburg burned to the ground. Rainfield and Beach Beauty both died in the fire. However, even with such a devastating event at hand Roberts keeps his head up. "Things will come together again," he said. "This will only slow me down; not stop me." Good luck, Andy.

Andy Roberts prepares Beach Beauty for a workout.

by Karen de Seve '90
Song Above

by Kate Snow '91

"LET IT RING IN THE BONY DOME! Keep the little cushion support and an open hollow tube!"

If this sounds like a foreign language, listen again. To members of the Cornell Chorus those phrases, coming from Director Susan Davenny Wyner '65, translate into beautiful music.

The Chorus, an all female treble-voice ensemble, boasts a membership that spans the diverse disciplines and age groups of Cornell. The sixty-member group meets twice a week to rehearse music ranging from early classical works to contemporary pieces in over eight languages.

"People are in the Chorus because they love to sing and they love the discipline that singing demands of them," said Mary Jaye Bruce '85, who first sang with the Chorus in 1982. "Many of us are afraid to sing alone, and singing in this kind of group gives you the freedom to drop your inhibitions."

Yet despite the freedom Chorus members have now, life was not always so easy for women singers at the Big Red. When the Cornell Musical Association was organized in 1874, the idea of including female vocalists was considered, briefly. But equal rights fighters were soon knocked down by the forceful argument that admitting women would distract the attention of male singers. Thus, it was the men of Cornell who received the vocal training, financial support and encouragement to sing for their Alma Mater.

Over the years, the singing tradition at Cornell grew, and eventually treble voices were invited for certain works. In 1921, the Cornell Women's Glee Club was born. With the help of Professor Thomas Sokol, Director of the Chorus from 1957 to 1987 and now Chairman of the Department of Music, the Chorus has now firmly established itself on campus.

By the late 1970s, it was clear that the newly-incorporated officers fought for office space and the right to sing alongside the Cornell Glee Club at commencement ceremonies. With the support and advice of members of the Glee Club, the Chorus strove to build an organization as strong as its brother group. An alumnae newsletter began and the officers spent hours scouring old yearbooks to compile a list of alumnai that would be used throughout the 1980s to build a strong support network.

The fall of 1987 brought a dramatic change to the voice of women at Cornell. An acclaimed soprano soloist who had worked with the world's foremost conductors, Susan Davenny Wyner, became director of the Chorus. Her vibrant presence, gripping intensity and genuine love of music rejuvenated the group.

"She has transformed the group, there's no question about it," said Bruce. "It means a lot for women to have a woman leading them, and to feel that, for Susan, directing is an adventure. Her zeal and passion teach us in ways many of us have never been exposed to. She teaches as much just in her example, in her person, as she does verbally."

Davenny Wyner '65 came back to Cornell in 1985 as head of vocal instruction. Her first contact with the Chorus came through a small capella sub-group of the Chorus, Nothing But Treble. "I came at it not as a great choral conductor but because I was convinced that I could share with them something about the art of singing," she said.

As a student, Davenny Wyner had managed to join and sing with any ensemble she could. "Part of my excitement in getting involved with the Chorus and the choral tradition here at Cornell comes from that early involvement," she said. "One of the things that I missed as a soloist was that wonderful sense of body to body contact in a group."

"I had always adored teaching. We explore such deep reserves of self in learning to sing," she added. "But I also love to perform, to draw all of our hard work and interpretive ideas together into that concentrated, living moment of performance."

That sense of life and animation has been infused directly into the group. "It is partly her excitement and her ambition that have made us more ambitious ourselves," said Krista K. Kuehnel '90, president of the Cornell Chorus.

With a new director have come changes in the approach to singing, the music performed and the quality produced by the group. "My goal is to draw chorus members into a wide range of musical experiences so that they are challenged to develop into richly imaginative artists and musicians," explained Davenny Wyner. "But at the same time I am trying to teach..."
them a very particular skill—the singing technique used by great classical singers. I think this makes our work together absolutely unique."

“Our musical quality couldn’t help but improve,” said Bruce. “Now, we’re joining the two disparate disciplines of learning the music and learning to sing.”

“She’s following her own ideas,” said Kuehnel. “When we get music now it’s often brand new or even composed for us.”

According to Bruce, what many don’t realize is what one can learn from singing. “There’s nothing that music really can not teach you,” she said. “Chorus rehearsals have the weight of any class. Singing involves dealing with one’s body and one’s mind at the same time. It is physical, mental and spiritual.”

As a graduate who now works at Cornell, Bruce sees the chorus in a different light than she did as a student. “After you graduate you realize the kinds of things you want to put your energy into. It’s much more than an energy release. I do a lot of writing and the music fuels that creative process.” The Cornell Chorus has played a significant role in Bruce’s life. “The Chorus and the music have kept me here. In fact, they’re a very major part of the reason that I stay,” she said.

From administrative fights in the 1970s the Chorus has grown through the past decade into a self-governed organization with an ever-increasing alumnae network. Recent years have seen a new alumnae newsletter and the creation of “the Cornell Chorus Association,” a group of over forty alumni and friends dedicated to supporting the Cornell Chorus. An Advisory Council is also in the works.

According to Kuehnel, the Cornell Chorus Council, the group of officers that run the organization, is much stronger today than it has previously been. It has expanded to include new positions and provides stability for the group. This is important for a group faced with the constant challenge of seniors graduating and new members auditioning to take their places.

“We’re a growing organization. We have the potential and the desire to create our own identity,” said Kuehnel. “We’re expanding and gaining more respect.”

To members of the Chorus, the tradition of choral singing for women at Cornell is important to maintain. “It’s something special when you’re with a group of women and experience that sort of camaraderie. It’s empowering,” said Kuehnel.

One thing that took Davenny Wyner by surprise was the “extras” that the Chorus provides for its members. “Of course the Chorus exists as an important and valuable organization because there is a need for treble voice ensembles to do the great works written for female voices,” she said. “But the group also provides important opportunities for us as women to develop our skills as leaders—to establish priorities and responsibilities and to act on them.”

The Cornell Chorus today continues to build on the foundation established so long ago. “It’s a mixture of old and new,” said Davenny Wyner. “We are continuing the work of the people who formed our organization and put their lifeblood into it. We are striving to reach their goals. But we are also beginning to build some new traditions.” Davenny Wyner cited the two-year-old Parents’ Weekend Concert as an example.

Along with its regular concerts each year, the Chorus also takes to the road. Recent tours have taken the group to New York City, Radcliffe and Wellesley Colleges, Brandeis University, and New Hampshire. “I’d like to see us continue this tradition of select and important appearances off-campus,” said Davenny Wyner.

The spring of 1988 marked the first time in history that the Cornell Chorus and the Cornell Glee Club appeared as equals in the annual Senior Week Concert. Davenny Wyner sees that as a milestone for the organization. “What a long way we’ve come!” she remarked.

“I hope singers in choral organizations realize that they are not only doing exciting work together, they are also guardians of a rare and precious musical culture,” said Davenny Wyner.

The Cornell Chorus provides the opportunity for women singers to do just that. Letting their voices “ring in the dome,” eyes intent on their director, treble music continues to float out high above Cayuga’s waters. ■

Cayuga’s Waters

Cornell Chorus rehearsing and continuing the choral tradition.
CORNELL HAS BEEN NATIONALLY ranked as the "prettiest campus in the Ivy League" by numerous magazines, newspapers, television networks and other media sources. In the March 5, 1990 issue of the Chicago Tribune, Steve Barrett, an advertising executive and Harvard alumnus, reiterated this statement and added, "With all that beauty around, you'd think Cornell students would relax. But they are very competitive. Academic excellence is an obsession here."

Barrett produced an "Ivy League Tour" video for high school students that actively pictures the Cornell campus, as well as the seven other Ivy League universities. Cornell emerged victorious in the "most competitive" category. Could there be truth in this observation?

To obtain the most accurate answer to this question, Cornellians in the College of Agriculture and Life Sciences were asked their opinions about this topic. Milo Novelo '92 said that "Everyone seems to want to help each other. I don't hang out with cutthroat, so if they exist, they must keep to themselves," he added. Judi Germano '91 agreed that there are some students who are extremely competitive. "But that is everywhere," she said. "I don't personally look at the overall atmosphere at Cornell as a "cutthroat environment," Germano confided. Germano, a transfer to Cornell, added, "Students take work much more seriously here than at the school I formerly attended [Fairfield University in Connecticut]. But, that doesn't mean that Cornell is more pressure-oriented. It's what you make of it."

Stephen Weinstein '91 feels that for majors in the Department of Communication, there is no direct competition within the classroom. Yet, he said, "I think that grades and textbook learning are not as important as the experience you get either from an extracurricular activity or from a summer internship." He further explained that the pressure and competition lie in the officer selection process for an organization or in obtaining an internship position at a prestigious company in New York City. "I find that students are constantly competing against one another in one of these two aspects, which is a direct contrast against the friendly atmosphere I see in the classroom," Weinstein said. However, Novelo believes that a greater sense of camaraderie among students can be found in group activities rather than in the classroom. As the PR Director for Visions, a student-run science fiction magazine based at Cornell, he has found that students in the organization are very willing to help one another. "There is so much enterprise and practical experience involved. Everyone is so motivated and willing to assist so that the experience is worthwhile for the students participating," Novelo said.

Kim Blake '92 said there is no competition at all in the Department of Communication, but, "I hear stories about students not allowing other students to use their notes," she remarked. "That's competition at its worst," she said. These other students Blake is referring to may be those in the Division of Biological Sciences, commonly referred to as pre-meds. Barry Israelwitz '91 is majoring in genetics. He said that most students in his science courses are not very cooperative and are very unfriendly. He added that these students always, "work overtime, in that they count 500 flies rather than the required 50. Their reason for this is 'just because.' " Concern about how they are doing compared to others in the class seems to be important to these students he explained. Similarly, Mari Ciottoli '92 is a science-oriented student in the Section of Microbiology. She agreed with Israelwitz and said that "Unfortunately, the students in my classes seem to be so caught up in their grades and their performance that they do not really appreciate what they are learning. I like to learn just for the fun of learning."

Through all of this, the issue of collegiality—cooperation among colleagues—and competitiveness shines through. Two professors in the communication department are currently conducting research on this topic. Professors Carroll Glynn and Dan McDonald are attempting to determine if there is bias in the collegiate review process. Glynn is the head of the Theory/Methodology Division of the Association for Education and Journalism and Mass Communication (AEJMC). Various scholars send papers to the division for the annual paper competition. Each paper is read by at least three peers who determine whether the paper merits presentation in the programs at the AEJMC National Convention held each year.

"There is a great deal of competition involved in the process," Glynn explained. Her goal in her current research project is to determine if the research paper selection process is a fair one, and if not, what some of the contributing factors are. Glynn and McDonald have designed surveys which were sent to all division members who reviewed papers and submitted papers to the conference. "The sense of collegiality is an important one," Glynn affirmed. She stressed that if any bias in the form of favoritism of one author over another does exist, it defeats the entire purpose of fairness in evaluating others' hard efforts and individual ideas. "It puts a damper on the entire process," she said.
A Bailey Tradition

Liberty Hyde Bailey is described as an educator who would enter and leave the classroom talking. On Sundays, this former Dean of the College of Agriculture and Life Sciences at Cornell would invite students to his home, where he would speak and read poetry aloud. The gatherings became so popular that Bailey began a bi-monthly lecture series to serve the demand.

Thus it is no wonder that a strong tradition of lecturers and speakers at Bailey Hall has developed. The 2,000-seat auditorium, the largest at Cornell, was built by New York state in 1913 to enhance both the ag college and the University. Bailey was honored with the naming of this building for his scholarly excellence as a professor and for his dynamic leadership as dean. Under his tutelage, the newly-formed ag college was developed into a significant facet of Cornell.

Bailey, a world-renowned horticultural expert, was also a writer, editor and poet. He encouraged discourse among the students, urging them to examine the basis of all ideas. The lecturers and speakers who have come to Bailey Hall continue this tradition of provoking curiosity and encouraging learning by introducing the Cornell community to a variety of personalities and issues.

Lectures at Bailey Hall are sponsored primarily by the student-run Cornell University Program Board (CUPB) or by offices within the Cornell administration. Other campus organizations, such as academic departments, the Inter-Fraternity Council and the Elephant Society of Sigma Phi Fraternity also sponsor speakers.

Founded nearly twenty years ago, the CUPB, formerly the University Unions Program Board, sponsors both speakers and comic entertainment. The group schedules a diverse selection of speakers, focusing on either political or literary topics. Past speakers include consumer advocate Ralph Nader, 1960s civil rights and anti-war activist Abbie Hoffman and a peace symposium debating nuclear disarmament. More recently, the CUPB sponsored a debate on abortion rights between Phyllis Schlafly and Sarah Weddington, and speaking engagements by Senator Gary Hart and author Alex Haley. In the spring of 1990, labor leader Cesar Chavez returned after only two years, due to popular demand, to speak at Cornell.

Some of the lecture series sponsored by the University are as old as Bailey Hall itself. The University lecture fund was first endowed at the beginning of this century by Goldwin Smith, for the purpose of "opening an intercourse with the world." This series sponsors at least one lecture episode each academic year by a noted scholar. Recent University Lectures have been presented by Umberto Eco, author and professor of semiotics at Bologna, Italy; Carlos Fuentes, novelist, playwright, and essayist; and Bronislaw Geremek, a member of the Polish Academy of science and an advisor to Solidarity.

Cornell's Messenger Lecture series was established in 1924 through a gift from Dr. Hiram Messenger, a Cornell graduate of 1880. The series was established to provide a "course of lectures on the evolution of civilization for the special purpose of raising the moral standard of our business, political, and social life." The lectures, which include topics ranging from art and archeology to sociology and current political issues, are sometimes presented at Bailey Hall. A recently-established lectureship at Cornell is the Henry E. and Nancy Horton Bartels World Affairs Fellowship. It was founded in 1984 to foster a "broadened world perspective among Cornell students." This fall, Mark Palmer, former United States Ambassador to Hungary, will hold this honor.

The presence of such a variety of speakers reinforces the issue of free speech; while the entire Cornell community may not agree with the opinions of the speakers, the speakers still have a right to present their views. Occasionally, the speakers who visit Bailey Hall are of a controversial nature, and their right to speak is questioned by Cornellians. In December of 1975, Nguyen Cao Ky, former head of South Vietnam, was driven from the Bailey stage by a chaotic crowd of anti-war protesters. Their jeers and shouts of indignation, encouraged by a faculty member who jumped onstage and took the microphone, led Ky to leave the stage with his speech hardly begun. The incident fostered the formation of a special faculty committee on academic freedom, which reviewed the Ky episode and issued a report urging the University to "combine academic freedom with academic responsibility for maintaining the right of free speech for those with whom we passionately and deeply disagree."

In April, 1989, protest erupted again over the presence of Reverend Louis Farrakhan, leader of the Nation of Islam, a black moslem sect, who has gained national notoriety for his racist and militant remarks. Students rallied and protested outside Bailey Hall, but they did not enter the hall or disrupt Farrakhan's speech. Other recent lecturers who raised a campus controversy include former Attorney General to the Reagan administration Ed Meese III and Dr. Riyad Mansour, deputy observer for the Palestine Liberation Organization to the United Nations. Their views as well as their right to speak, were similarly protested in a more peaceable manner, therefore reflecting Cornell's policy in light of the Ky incident.

Liberty Hyde Bailey's encouragement of questioning the unknown, of curiosity and learning are continued through the speakers and lecturers who come to Cornell. Nearly every lecture ends with an open question and answer session promoting this exchange of ideas. From Franklin D. Roosevelt to Gloria Steinem, Cornell will continue to uphold the tradition of excellence at Bailey Hall.
...NO CORNELL ALUMNUS WOULD exchange those four years in his life for any other experience, and it is an inking of that feeling which seniors are just beginning to realize. It fastens on them most strongly when they forget those last few times as classmates at Senior Singing. Men to whom the Cornell melodies are much more familiar by ear than by performance nevertheless once or several evenings seek a place in the group that crowds the portico and steps of Goldwin Smith Hall. For there, while the sun is slowly sinking and the evening light grows dimmer, the seniors as fancy directs give voice to all the Cornell airs, grave and gay.

—O.D. von Engeln '08  
Concerning Cornell

Senior Week, the week of Commencement, has always been a part of Cornell, officially or unofficially. Many traditions, like the Senior Singing described above, have come and gone, while others survive and new ones surface. While Senior Week today leans more towards parties and fun, the First Annual Commencement week of 1869 was more academically inclined. A "Scientific and Technological Address by Hon. William J. McAlpine," the "Address to the Candidates for Degrees," a Board of Trustees meeting, the laying of the cornerstone of McGraw Hall and the addition of the Great Tenth Bell to the University Chimes were the scheduled events for the week. And, additionally, each member of the Class of 1869, all eight of them, gave a lecture at Commencement.

By the Third Commencement in 1871, more events were planned for the graduating class. The Woodford Prize Medal in Oratory was a competition that went on for several years. Class Day Exercises also began that year, and constituted a strong part of Senior Week until the 1960s, where they and a lot of other traditions disappeared.

Class Day exercises were held in Library Hall, which, according to Cornell University Archivist Gould Colman, was on the corner of North Tioga and Seneca streets, where the Norstar drive-in stands now. "A lot of university activities were held in Library Hall," said Colman. "It was the first major contribution Ezra Cornell made to Ithaca." At one point, Class Day activities were in two parts called In the Armory (which stood where Hollister Hall is now), and On the Campus (which usually took place in a grove that used to stand in front of Lincoln Hall).

The exercises consisted of an opening address by the Cornell President, followed by the presentation of the class essay, the class oration, the class poem, the class history and the class song. The "passing of the pipe," referred to at first by "smoking the calumet [tobacco pipe]," was a tradition that had a symbolic meaning. The same pipe, a large, difficult-to-light one, is used each year, when a man in the outgoing class passes the pipe, and representing the responsibilities of the senior class, to a representative of the following class; according to the 1962 Senior Week Edition of the Cornell Daily Sun. The ceremony was a symbol of "an unbroken chain carried on from the very beginning of the university," said the same article. This tradition also lasted until the 1960s.

Since the beginning, the Glee Club performed concerts, as it still does, and the Dramatic Club (known in the beginning as The Masque) sponsored plays. Sporting events were also usually a part of Senior Week. Baseball games, track meets, cricket matches and crew races were among some of the events.

The Senior Supper was usually held at the Ithaca Hotel, where Iszard's/McMurdy's is now. A few dishes at the 1877 Senior Class Supper were: Baked Cayuga Lake Trout, four different oyster dishes, roast beef, lobster salad, Leg of Southdown Mutton, Beef tongue, Westphalia ham, Loin of Veal, Heart and Buffalo Ham—not even including side dishes or desserts.

Senior Singing, first mentioned in the Senior Week schedule of 1910, continued on very strongly until it ceased in the 1960s. But Senior Singing wasn't the only musical event that occurred during Senior Week. Duke Ellington played at Commencement Week in both 1940 and 1962. Peter, Paul and

Karen Pisetzner '90, one of the student coordinators for the class of 1990's Senior Week, hopes that Senior Week, which has been a success in the past, will be another sellout week.
Mary gave a concert for the Class of 1963 and in 1967, the Boston Pops and Martha and the Vandellas played for the seniors.

Some traditions lasted only a few years. Milk Punch parties occurred during Senior Week in the late 1950s and early 1960s. Milk Punch was a drink containing milk, whiskey (or rum), with added sugar or nutmeg. However, this was only a fad and it too disappeared.

In 1958, “Ten lectures and discussion programs that span the range of intellectual pursuits” were planned, according to the 1960 Senior Week Edition of the Cornell Daily Sun, and the “Faculty Forums” that resulted were a success. By 1961, they were a very big part of Senior Week and offered interesting lectures like: “Carrots and Coconuts: Some Investigations of Growth,” “Heart Disease and the American Male” and “The Musical Portrait of Ralph Waldo Emerson in Ives’ Concert Sonata.” The ever-increasing numbers of seniors and alumni attending these events, however, caused the two groups to have their weekends separately, starting in 1963, and the Faculty Forums became more of a part of Alumn Weekend.

In the 1980s, however, Senior Week has undergone some major changes. Until 1984, students ran the whole operation themselves out of the Alumni Office, according to Kris Corda, the Class Advisor. But in the fall of 1984, Corda’s position was created, and she became advisor to those organizing Senior Week. In 1985, Senior Week became supported by the Class Council and in the fall of 1986 the council was given money from the Student Activities fees. With the extra money, a dwindling Senior Week was given new life, Corda said.

Several events being planned for this year have since become traditions: Grand Zinck’s (named after a bar called Zinck’s, owned by Theodore Zinck), Fun in the Dusk (a party at dusk), canoeing, dancing, horseback riding, winery tours, a Champagne Brunch at Rulloff’s, faculty lectures, Twilight Dinners, a golf tournament and Senior Cornell Night (which is similar to freshman orientation activities, with performances by musical groups).

But what about the unofficial traditions? “Everyone wants to be kissed on the Suspension Bridge,” said Karen Pisetzn ‘90, one of the Co-Chairpersons for the Class of 1990’s Senior Week and a participant in last year’s activities. “People do things that they didn’t get to do while they were here.” “Someone I knew last year wanted to go up into the stacks in Olin Library because it is prohibited to undergraduates—so they snuck up,” she added.

“People are always taking pictures of themselves in Andrew Dickson White’s statue’s lap during Senior Week,” said Corda. “And during the actual graduation ceremonies, each college throws something into the air when their college is announced,” Corda added. “Students from the College of Agriculture and Life Sciences throw up hay, for example,” she said.

Another event that Pisetzn hopes will occur for a few more years is having former Dean of Students David Drinkwater speak regularly at Cornell Night. “Last year he came out onto the stage as a surprise guest and people expected him to make a long speech,” she said. What they got was a three-word speech from Drinkwater, who then walked right off the stage. “People went wild,” she added.

“I’m definitely going to participate—you’ve only got one chance to do it,” said John Ivison ’90, about Senior Week. “I’m looking forward to saying goodbye to all my friends,” he added.

“It will be our last fling together, because you don’t know when you’ll see these people again.”

Ivison plans to go to a lot of events. “The Waterfront, Happy Hour, Grand Zinck’s, the Champagne Brunch at Rulloff’s—it all sounds awesome. I can’t wait,” he said.

Senior Week will have a somber note, however. “It’s the last opportunity to say goodbye to the Alma Mater and reminisce about all I’ve done and learned since I’ve been here,” Ivison said.

“It’s a chance to thank Cornell,” he added.

But not everyone is satisfied with the Class of 1990’s Senior Week plans. “Some of the events like canoeing sound great but I think that the winery tours are kind of lame,” said Amy Marcus ’90. “We can go to them anytime. They should plan a trip to Darien Lake [amusement park]. That’s where I’ll be for at least one day,” Marcus added.

“I’m psyched about Senior Week because it’s our last time to have fun at Cornell and also because I’m graduating. But it also means I need a job.”

But Corda thinks there is no problem with the program. “We always sell out,” she said. “There’s no competition. No one has any classes.”

Though Senior Week events have changed over the years, with some fading away and some surviving, the Cornell spirit that seniors have still lingers, while they celebrate one last time with friends and look back at their years spent at Cornell. Seniors will be singing this year, but it won’t be on the steps of Goldwin Smith Hall. They will be singing the Alma Mater in Schoellkopf Stadium at graduation.
Shrinking The World

by Michael S. Shappe ’91

A PROFESSOR NEEDS TO GET A MESSAGE to a colleague at another university several hundred miles away—fast. She’s about to call Federal Express, prepared to spend a lot of money. Then she remembers—her colleague has an electronic mail address. She hops on her computer and dials into the campus mainframe. Her message is delivered in minutes. Within two hours, she has her reply.

A freshman is feeling depressed, missing his home, his friends. He wishes he could see or talk to his best friend from high school, but long distance is too costly, and he was never much for letter writing. He turns on his PC and dials up the number of the campus mainframe on his modem to do a project. There is a message waiting, and it is from his best friend.

In its simplest form, electronic mail, or E-mail, as it is commonly called, is just like “normal” postal mail. One writes a letter, addresses it, and gives it to a carrier to deliver to that address. Just like our own postal service, the electronic mail carrier (a sophisticated program) either handles the delivery itself if the recipient is “local” (on the same machine), or sends it off to a carrier on another machine if she is not. This is a somewhat simplified view of what actually goes on, but it will do for now.

Cornell has direct access to two international networks that carry electronic mail, and indirect access to many others through “gateways”—connections between two networks. The two electronic networks, BITNET (Because It’s There Network) and InterNet connect universities and research corporations around the globe, and offer many services in addition to electronic mail. The former network is aimed almost exclusively at universities and colleges, and is designed to foster an exchange of ideas between research institutions. The latter is an ad hoc extension of the Defense Advanced Research Projects Agency network (ARPANET), and has similar goals, but encompasses universities, military establishments and corporations.

Electronic mail’s main convenience is its speed. A message over either network can get from Ithaca to New Zealand in a matter of seconds, at most a matter of hours, as opposed to the normal postal service’s two-to-three days for out-of-town mail and considerably more for overseas service. Whole conversations can be carried out electronically, and, unlike using the telephone, where long silences can be unnerving, you can spend time thinking about exactly what you want to say.

Electronic mail is cheaper than using the telephone, as well. For the Cornellian, at least, the end-user pays for electronic mail only in computer time. For staff and students, this essentially means free long-distance communication, limited only by their weekly time allowance in their free, University-provided accounts. Even for “paying customers” of Cornell’s machines, a long-distance message will only cost as much money as it takes computer time to write the letter—a couple of dollars at most.

Overseas postal service is not only notoriously slow but reputed to be very unreliable. By contrast, electronic mail over BITNET or InterNet almost always gets where it’s going, even if the destination is in the Netherlands or West Germany or New Zealand.

But what use is it? Well, certainly, electronic mail is a great tool for correspondence. You can be in near constant touch with any friend or colleague, no matter how distant. As Jeff Anbinder ’91 said, “Being less expensive and by far more convenient than the U.S. Postal Service, E-mail allows me to keep in touch with friends that might otherwise have fallen by the way side.”

Bruce Lewenstein, a professor in the Department of Communication, has put electronic mail to a more practical use. “I’m collaborating with someone at Indiana University. We sometimes send messages back and forth up to three or four times a day,” Lewenstein said. The messages are sometimes just chat, but more often, they are questions or comments about proposals they have sent each other to look over. He makes similar exchanges with a colleague at Stanford, with whom he is writing a textbook. Lewenstein said, “It allows us to do things where FedEx wouldn’t work—and wouldn’t be very cost effective, anyway.” It also makes him easier to reach, he said. Rather than playing “phone tag,” he can just leave E-mail, and have a response waiting for him at his convenience.

But correspondence in itself would merely be a luxury. The networks also allow for “mailing lists”—electronic addresses that, when sent to, redistribute your message to a list of subscribers. The result is like an electronic bulletin board or round-table. People can discuss various topics as a group while exchanging ideas. Furthermore, these lists can provide an opportunity to “meet” others with similar interests from all over the globe. For example, Lewenstein uses the FUSION-L mailing list to keep up with discussions in the field of cold fusion. The variety of topics is limited only by the imagination and the demand.

The speed and cost-effectiveness of electronic mail, combined with the globe-spanning networks of which Cornell is a part, make E-mail an excellent tool for keeping in touch with people and information that might otherwise be missed.
Should It Be The Countryman?

Readers have asked, "Why Countryman?". Some consider the title to be gender-biased. The "man" in Cornell Countryman originates from the title given to the College of Agriculture and Life Sciences magazine back in 1903. In old English, the word "man" refers to a person or a human being. It is derived from the Latin root "homo" meaning "a member of the human species." To modify the title from Cornell Countryman to a gender-free title, such as "Countryperson," would unnecessarily change the Countryman's status as the longest running student produced agriculture magazine in the nation.

Equine Performance Is Tested

The Cornell University College of Veterinary Medicine recently opened their equine performance testing clinic. The clinic consists of three units, a Respiratory Function Testing Unit, a Lameness and Gait Analysis Unit, and a Fitness and Performance Testing Unit. While the Respiratory Function Testing Unit is the only part currently in operation, it contains the main component of the clinic. This high-speed treadmill permits veterinarians to examine problems in a horse's airways. Director of the Respiratory Function Testing Unit, Doctor Richard P. Hackett, said, "We can now reach and monitor the equivalent of peak performance in an exercising horse under controlled conditions."

A second advantage the treadmill provides is to test horses' airways without added resistance or interference that can be experienced outside of a laboratory setting. The treadmill also serves as a track for the horses to exercise on regardless of outside weather conditions.

Student Entrepreneurs Meet

A series of lectures involving student entrepreneurs that have started and operated independent businesses will run through March and April at Cornell. Kiersten Fries '90 has spoken on the topic, "Getting your business past the first crucial years."

Fries is currently president of Madison and Tower, a non-profit, student-run, advertising and public relations firm.

The lecture was part of a series sponsored by the Cornell Entrepreneurs and Student Agencies. Cornell Entrepreneurs is composed of 86 students who share an interest in operating small businesses.

Student-owned Student Agencies Inc. operates 16 businesses and owns three buildings. The purpose of the lecture series is to "promote undergraduate entrepreneurship on campus," said Nat Wasserstein '90, co-founder of Cornell Entrepreneurs.

Cornell Recycles A Success

Cornell Recycles is a University-sponsored recycling program expected to save Cornell from newly implemented tipping fees. These fees charge per ton of trash dumped into municipal landfills.

The program Cornell Recycles began in 1988 and provides two wastebaskets in place of every wastebasket in on campus offices. The wastebaskets, one marked Recyclable Paper and one marked Non-Recyclable, encourage people to sort recyclable paper out of their ordinary trash.

Cornell Recycles has a near total recovery rate of recyclable material. Cornell may be the first large university campus to achieve this goal. Harvard officials and representatives from the Massachusetts Institute of Technology are considering implementing similar programs on their campuses.
A Mentor of Merit

by Cyndie Shearing '90

In the Jan./Feb. 1988 issue of the Countryman, we ran a profile of Marge Hubbert. This follow-up focuses on one of her most recent awards.

MARGE HUBBERT IS THE FIRST LECTURER to receive the Ho-Nun-De-Kah Honor Society Professor of Merit Award. She was named the 1988-1989 Professor of Merit of the College of Agriculture and Life Sciences at the Senior Celebration (barbecue) on Friday, May 26, 1989.

Hubbert was thrilled to receive the award, and said "It was a happy surprise, and a moment that I will remember for a long time." She was also stunned that the teaching assistants who made sure she attended the barbecue were able to keep the secret.

Since 1947, seniors in the College have selected a deserving professor to receive this award. "The purpose of the award is to recognize an individual who shows excellence in teaching and advising and who has a general concern for students," said George J. Conneman, Director of Academic Programs for the College. Ballots are weighted according to class size, so that professors teaching smaller classes have equal opportunity to win.

Getting to know her students personally is what Hubbert finds to be the most rewarding aspect of teaching. She teaches Financial Accounting to 575 students from all parts of the University each spring semester. During each fall semester, she teaches Managerial Accounting to about 250 majors in the Department of Agricultural Economics. The concept of ethics in business is an ideal that she tries to convey to her students. She also expects that they will conduct themselves with high integrity in the classroom and in the business world. Although the classes she teaches are typically large, Hubbert gets around the impersonality by teaching two lab sections of 35 students every week. This allows her to get to know the students in the large classes on a more individual basis.

"She seems to be one of the few professors who is not only a teacher, but a person you can approach and ask questions of easily," said Al Gordon, human ecology '92. He is currently taking Financial Accounting and said, "Although her lectures are taught in a very formal manner, there does not seem to be the typical wall of formality which usually exists between students and teachers."

Hubbert's rapport with students also extends to her teaching assistants and paper graders, a group which she enjoys getting to know well. James Heintz '90 is currently a teaching assistant for Financial Accounting. He took that course and Managerial Accounting from Hubbert last year. He said, "People respect her and like her courses. She is a good teacher and fun to work with."

Her approachability and open door policy often result in Hubbert lending an ear to a student. If a student approaches her with a personal problem, she listens and tries to help, although she is not a certified counselor. "Sometimes there is nothing I can do to help a student with a problem, but I will always try to steer them towards someone who can help them," she said. Often, she finds that students are just looking for someone to listen to their concerns, much as their absent parents might do.

Hubbert was born and raised in the Niagara Falls and Buffalo, New York areas. She moved to Ithaca when her husband Bob finished school and began working at Morse Industrial. She commuted to SUNY Binghamton to get her accounting degree, and subsequently worked full time in a public accounting firm.

She soon discovered that working as a CPA was not exactly what she wanted to do. A friend suggested she look into teaching. Since she had always liked the academic life, she took the plunge and switched careers. After receiving her MBA, Hubbert joined the faculty of the agricultural economics department in 1983. Her responsibilities currently include teaching and advising 45 students.

Her commitment to excellence in teaching, approachability and willingness to become personally involved with students has been recognized by those who may be in the best position to judge: the students themselves. In selecting Marge Hubbert as the 1988-1989 Professor of Merit, the seniors in the College clearly picked a winner!

New York State College of Agriculture and Life Sciences, a Statutory College of the State University, at Cornell University