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ON THE COVER - Fall Creek at Flat Rocks is one of numerous scenic spots to enjoy October outdoors within the Cornell environment. Here is a quiet place to catch the fading moments of summer warmth and greet the emergence of autumn coloration. But the turn of the seasons may be scarcely discernible as you reflect on the rush of campus events while wading the stream's pools and riffles or looking at leaf patterns in the nearby woods. And yet for the times you can spare away from studies you enter a landscape where change is always certain but progress may be measured solely by how successfully we are able to preserve scenes of this type.

PICTURE CREDITS
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A Countryman Interview:
Dean W. Keith Kennedy

In his first official interview since taking office on July 1, Dean W. Keith Kennedy addresses himself to some thoughts and insights into his new role as the chief administrator for the New York State College of Agriculture and Life Sciences. Of considerable interest to alumni, students, faculty, and the Cornell community is the future direction of the College and the possible approaches that will be taken to solve current problems and meet the challenges that lie ahead. Dean Kennedy brings to this assignment a strong background in commercial agriculture, broad experiences as an administrator, and a demonstrated ability to devote much energy and enthusiasm to his work.

Countryman: Dean Kennedy, it is a relatively short walk from Day Hall, where you recently served as the University’s vice provost, to Roberts Hall, your new headquarters as dean of the College of Agriculture and Life Sciences. But in terms of the challenges you will be facing, how would you judge the “distance” between the two assignments?

Dean Kennedy: Both positions are related largely to the educational and research programs of the University. As vice provost, I worked chiefly with other members of the President’s executive staff and with the deans and directors of all academic units. I became well acquainted with the many educational activities of the University as well as the numerous administrative and fiscal problems of a university as complex as Cornell. My contact with students and faculty, on the other hand, was limited to a rather small number in specific areas of responsibility. After five years in central university administration, it is exciting to return to the College of Agriculture and Life Sciences where I will have an opportunity to work more closely with students and faculty on a number of challenging teaching, research, and extension problems.

Countryman: What major forces do you see influencing the College’s present scope and direction?

Dean Kennedy: Perhaps never before has the College been under such tremendous pressure to respond more quickly to a wide range of demands. These pressures come from a rapidly changing agriculture and from a society increasingly concerned about environmental and social problems. The primary, but not the sole, responsibility of the College is to serve agriculture through research, teaching, and extension. If we are to maintain a strong agricultural industry in New York State in the face of the stiff competition from other regions, we must continue our research and educational programs in production agriculture, food science, business management, and agricultural engineering. We also must maintain strong research and teaching programs in the basic biological, physical, and social sciences which are the foundation for the applied disciplines. To serve the agricultural and related industries effectively, the College must devote more attention to maintaining or improving the quality of the environment. Agriculture has been concerned about the wise use and protection of our natural resources, but mistakes have been made in the application of technology. We must continue to strive to minimize the adverse effects of technology and still work for high production efficiency. Our task is to find the appropriate balance among competing needs and concerns. A second area requiring more of the total effort of the College is work in the improvement of the social services and economic development in rural areas. The College cannot and should not undertake this job alone; rather it must take the leadership in securing the cooperation of colleagues from other colleges and public and private agencies in tackling these tough and complex problems.

Countryman: It had been pointed out that the College is New York State’s last real storehouse for agricultural knowledge. Some say the College’s main strength is derived from the considerable teaching and research oriented to the agricultural sciences. It is argued that a strong, dynamic agriculture should be the College’s primary mission, that major programs and policies should continue to be directed to serving commercial farming and
"Now, more than ever, we must maintain our objectivity and not yield to every new demand nor ignore those who question some of our current programs."

the agricultural industry to guarantee that all residents are assured a continuous supply of reasonably-priced, high-quality food. Would you comment on this viewpoint?

Dean Kennedy: As mentioned earlier, the College does have the important mission of helping farmers and other segments of the agricultural industry to produce wholesome, nutritious, high-quality foods at reasonable prices. Low cost food is beneficial to all, especially to low income families. This is the area where we have the greatest expertise and it will continue to be a very important responsibility. On the other hand, we are not serving the needs of society properly if we concentrate solely on the production of food without regard to possible adverse effects on the quality of rural communities and the environment. Rural development and environmental studies are receiving increased attention and will receive even more attention in the future.

Countryman: If increased energies and efforts are diverted to social welfare problems, how will this affect the traditionally strong emphasis given to commercial agriculture?

Dean Kennedy: The College never has and never will be able to do everything it would like to do for agriculture, rural people, and society as a whole. It is important to maintain a strong research and extension program in food production, processing and marketing, but we cannot defer the College’s becoming more deeply involved with environmental and social problems. Thus there will be some shifting of resources from our more traditional research and education programs to these new areas. In making these shifts, we must make a careful analysis of present programs and then reduce or eliminate work in the production and related fields which we consider to be of low priority. If the adjustments are planned carefully, the overall program for serving commercial agriculture will not suffer seriously by this increased effort in environmental and social areas. Inflation, rising costs, and budget cuts have prevented the College from making many of the adjustments it deems desirable.

Countryman: A major issue of our times is environmental quality. It appears that the College has a continuing role to play in this area. What plans do you have for a greater commitment of resources to environmental improvement?

Dean Kennedy: In July 1972, Professor Raymond C. Loehr was appointed as Director for Environmental Studies. The appointment of an outstanding scientist and engineer to this post demonstrates the great importance we in the College administration attach to environmental studies.

Countryman: Where, specifically, should the College be concentrating its efforts in this area?

Dean Kennedy: As a College of Agriculture and Life Sciences, we should and are concentrating on environmental problems as related to disposal of livestock and food processing wastes, reducing nutrient runoff from agricultural lands, and devising new methods and systems of pest control which will decrease the need for or the amounts of persistent pesticides used. Also the College is expanding its work in fishery, wildlife, and other natural resources areas and in terms of how plant materials can be utilized more effectively for increasing the beauty of our homes, parks, and general landscapes. The College will continue to work with soil conservation districts, the Agricultural Resources Commission, and others who are interested in the preservation and wise use of our land and water resources.

Countryman: What opportunities do you see for alumni to take a greater role in College affairs?

Dean Kennedy: The College deeply appreciates the strong and continued support it receives from many of its alumni. We want alumni to be interested in the College and to make sure the College of Agriculture is serving the people. We operate on the basis that concerned friends will be strong supporters, but at the same time, constructive critics. We want our alumni to be concerned friends who will never hesitate to tell us of our strengths and our weaknesses.

Countryman: Are you planning any new programs that might generate greater involvement of the alumni?

Dean Kennedy: Effective mid-September, Mr. Laing Kennedy joined the College as Assistant to the Dean. He will carry on the duties previously handled by Mr. Richard Church. Laing will work closely with the alumni and other friends of the College who have played a major role in the wonderful start which has been made in the College of Agriculture Fund. Our task in this area, however, is far from complete and Laing will be working closely with the alumni in the building of alumni relations and continued financial giving for scholarships and innovative educational programs.

Countryman: In what ways might College of Agriculture courses be changed or improved to help students meet the needs and demands they face in the outside world?

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“We are not serving the needs of society properly if we concentrate solely on the production of food without regard to possible adverse effects on the quality of rural communities and the environment.”

Dean Kennedy: The courses and teaching programs of the College should continue to stress the understanding of basic principles and theory with due regard for the application of knowledge to the solution of problems and the operation of farms and other agricultural industries. During the course of their education at Cornell, students should continue to have the opportunity of gaining experience as to how basic knowledge is applied in the field.

Countryman: With fewer students studying for careers in full-time commercial farming, what new training opportunities do you envision for the College?

Dean Kennedy: The academic offerings of the College of Agriculture and Life Sciences provide an opportunity for specializing in a wide variety of fields ranging from basic studies in the biological, physical, and social sciences, to the applied areas in commercial agriculture, food processing, food distribution, natural resources, the health sciences, communication arts, education, and rural sociology. For many years the percentage of graduates from the College going into commercial farming has been low. The downward trend will continue, but a high percentage of the graduates will find careers in the broad range of agricultural industries and agencies concerned with agricultural production, land and water resources, rural development, and other social services. New training opportunities in the College are likely to be modifications within existing programs rather than the establishment of entirely new areas of study. One example would be the development of specific options whereby a transfer student could obtain a professional master's degree in three years at Cornell.

Countryman: At this point in time, what is the single most important thought or message you would like the faculty to understand regarding your concerns about the College's present operations and future direction?

Dean Kennedy: There is no single thought or message regarding an operation of a research and educational institution as large and complex and with as many responsibilities as the College of Agriculture and Life Sciences. Obviously we should strive for excellence in all of our undertakings. We must continue to have strong research and teaching programs in the basic sciences. We must continue to be responsive to the research and educational needs of our food and agricultural industries, but at the same time devote more attention to rural development and environmental problems. Hopefully additional funds will be provided to meet these increased demands but many will have to be met through reallocation of existing resources and through more aggressive leadership in seeking the cooperation of other colleges and public and private agencies. The challenge to the faculty and the administration is to maintain a realistic perspective of the mission of the College when its accomplishments are being questioned. Its tremendous success in helping to develop a high efficient agriculture has freed many people from the task of producing food. But the advances in agricultural technology have caused displacement of people and threats to the quality of the environment. The continued need to maintain research and extension programs for commercial agriculture and at the same time to devote more attention to social and environmental issues has placed new and conflicting demands upon the College. Now, more than ever, we must maintain our objectivity and not yield to every new demand nor ignore those who question some of our current programs.
Trees such as the graceful American elms that border the Ag Quad or arch above East Avenue create a reassuring atmosphere of permanence, until suddenly, where last year there was a tree in whose shade you sat and studied, there is now only a stump or a circle of fresh soil. What has happened? Last spring the tree was there, leafy and green, and now it is gone. Why on earth did they cut it down?

The answer is most likely that although the tree may have appeared to be far from dead, it was badly infected with either Dutch elm disease or a more recent problem, phloem necrosis. It could not be cured and had to be removed to protect the remaining elms.

I talked with Richard Pendleton, Department of Entomology, about the elms, and the efforts to save them as long as possible. Since the 1950's, he told me, Cornell has been fighting the Dutch elm disease with a continuing program of sanitation. There is no "cure" for Dutch elm disease, but it can be kept under control by the prompt removal of all dead and dying elm, whether it is infected or not. Since the disease generally first attacks a limb rather than the main trunk of the tree, it is sometimes possible to save a tree by removing that limb before the disease spreads to the rest of the tree. This requires constant vigilance as the disease spreads rapidly and the limb must be removed soon after infection.

Dutch elm disease, inadvertently introduced from Europe in 1930, and first spotted in New York State in 1933, is caused by a microscopic, rapidly dividing fungus, Ceratocystis ulmi. The fungus clogs the conducting vessels of the tree, spreading throughout the vessel system and sending threadlike filaments into the wood. Inevitably, this kills the tree, often within the year, though a large tree may take several years to die. The fungus can be seen in the sapwood of a cut branch as dark, brownish streaks, or in cross-section, as a circle of dots or solid ring just under the layer of bark.

The fungus is spread from tree to tree by either of two species of bark beetles, Scolytus multistriatus, the lesser European elm bark beetle, or the native elm bark beetle, Hylurgopinus rufipes. These are tiny beetles, the adults measuring only about an eighth of an inch long. These tiny beetles burrow under the bark of dead and dying elms to lay their eggs. There the eggs hatch, and the larvae grow and pupate, to emerge as adults and fly to a healthy tree where they chew their way through the bark, either to hibernate or to feed. With them they carry the sticky spores of the fungus which grow profusely throughout any moist cavity in the infected tree, such as the tunnels formed by the burrowing of the beetles.

Twice a year, once in the spring and again in the fall, the Campus Tree Committee makes a walking tour of the campus, checking on each individual tree for signs of damage or disease of any sort. If an elm branch shows wilting or other signs of disease, the infected wood
is removed back toward the main trunk until no streaking is seen. If the infection has spread through the tree, it must be cut down.

All dead or dying wood must be removed from elms that are not yet infected also, for the elm bark beetles, which act as vectors for the disease, will lay their eggs there as readily as in infected trees. This amounts to a sizeable amount of pruning and cutting, but over the years has kept the Dutch elm disease from wiping out the elms on campus.

In addition to this program, the elms are sprayed each year, from early spring, before bud break, through the summer. Dutch elm disease and the beetles that carry it are far from the only pests that attack elm trees. Other insects must also be dealt with. In order to effectively hit most of these, as well as the elm bark beetles, the trees are sprayed four times. The first, in April, is a dormant spray of methoxychlor to prevent spore carrying beetles from feeding on the living bark of healthy trees. At the end of May, after the leaves are out, the elms are sprayed with a mixture of methoxychlor, to combat leaf feeders such as cankerworm and elm leaf beetle, Meta-Systox-R to reduce the population of leafhoppers, and benomyl (Benlate), a fungicide.

Benomyl is a relatively new compound which shows promise as a preventative of the Dutch elm disease. The results are not all in yet, but it appears to be effective against very recent infections, though not as a "cure" for a badly diseased tree.

These added precautions against the Dutch elm disease are an important supplement to the sanitation program. Although for the most part, trees 700 to 1000 feet from a diseased tree are too far away for the beetles to reach; occasional long flights or winds can carry the beetles for miles, even into new territory where the disease has not been found before. In addition to the beetles, Dutch elm disease can also spread through root grafting where trees grow close enough together to have overlapping root systems. Where the crowns of the elms touch, the roots generally do also. This is particularly a problem where elms are planted in rows such as those along East Avenue.

The combination of sanitation and spraying with methoxychlor and benomyl is helpful in combatting Dutch elm disease. However, another serious disease has recently hit the campus elms. It is called phloem necrosis and, like Dutch elm disease, attacks the conducting vessels of the tree. However, it is not a fungus, but a virus, and is carried by leafhoppers rather than beetles. As yet, there is no way to kill the virus, so the only way to control the spread of the disease is to reduce the numbers of leafhoppers. A spray of methoxychlor and Meta-Systox-R during late June or early July, and another in early August is aimed at controlling leafhoppers to keep phloem necrosis from spreading to the trees that so much effort has been, and is still being spent on to save from the Dutch elm disease.

A tree is not a permanent feature of the landscape, and it takes constant care and an incredible amount of work to keep the campus green and shady. The elms are really only a part of the work, Pendleton said, and actually one of the easier jobs. You can move in with big equipment and spray them all in just a short time. But other ornamental plantings have different pests and diseases too, and need different treatments. There are aphids on the beeches, anthracnose can attack the oaks and London plane trees, the rhododendrons get mildew, the yews, and there are lots of them all over campus, get infested with mealybugs, the birches and hawthornes attract leaf miners, and the list goes on almost endlessly. On each tour of the campus, the Campus Tree Committee investigates each tree carefully, and decides what, if any, treatment is called for. It takes a lot of man hours, a lot of work, a lot of money to preserve our trees. Is it worth it all?

The trees are largely responsible for the peaceful, almost rural atmosphere that pervades the busy University community. They shade the streets and paths, they rustle outside the windows of classrooms and offices, attract squirrels and an interesting variety of birds. They also help to hide, or camouflage the shapes of ugly buildings, and to enhance attractive ones. Cornell without its trees would be unthinkable, and no amount of money or labor can be so much that it's "not worth it" to keep the streets and the quads bordered by trees.
One quick way to make it to the top at Cornell is to take advantage of the many fine vistas that await you from the various lookout points around the campus. These panoramic views allow you to see the University and its environs from a standpoint seldom realized at ground level. Atop these high spots you soon develop a sense of the dimensions “far above Cayuga's waters.”

You oversee surroundings that encompass some 750 acres of main campus, populated by more than 400 buildings and decorated with approximately 4,000 deciduous and evergreen trees. The academic world is at your feet. Problems and challenges and the striving for formal goals appear to fade into the horizon. On a clear day you may even see forever as the sights beyond Cornell and Ithaca come into closer focus. So pick yourself a good vantage point and prepare to enjoy the view. Whether your perch is the summit of Bradfield Hall or the top of McGraw Tower, the domain you survey is certain to prompt reflection and inspiration. There are a number of eye-opening views to explore from Cornell's taller buildings. Getting to the top of them is only part of the experience involved. But sooner or later the distant reaches disappear, the magic of far away places fades, and you must face the reality of the trip back to solid ground again. Yet for awhile there is a chance to rise above mere surface happenings and see the world around you from a fresh, new viewpoint.

*Viewed from the Veterinary College's new Multicategorical and Laboratory Animal Research Wing, Bradfield Hall towers above treetops.*

*In center photo, you look west from Bradfield Hall over the new Uris Hall and McGraw Tower, a Cornell landmark, to Ithaca and the countryside beyond.*

*On the far right, the view North-Northwest from Bradfield encompasses the Ag Quad, Martha Van Rensselaer Hall, and beyond that another vantage point, the Chemical Research Building.*
At left, the Multicategorical Wing at the Veterinary College rises its ten story height above the sprawling buildings and the greenhouses of the eastern reaches of the campus.

Below, Beebe Lake and the North Campus as seen from the Chemical Research Building.
Standing by the pool, water rushes down the falls behind you. Thirty yards away, everyone on the shore is watching. Arching up into the air, a short dive off the edge of the falls. Push off, up in the air and break into the chilling water below. Pulling the water past in strong strokes, you rise to the surface and swim to shore. Resting there, you watch as others dive. Then it’s your turn again.

Almost every student at Cornell goes swimming in Fall Creek gorge at one time or another. With the arrival of warm weather and hot afternoons it is refreshing to dip into the gorge's cool waters or sunbathe on its rocky ledges.

Early in the school year, when summer heat still burns, kids bask in the sunlight even though classes are already under way. Guys in blue jean shorts and girls in bikinis make their way down the winding paths to the gorge bottom and the pool just below the suspension bridge.

As long as the gorge has been accessible, students have trod down its path to this natural pool and the fun it brings. It's just as popular today as it was years ago.

At the turn of the century, the gorge's paths and small footbridges were maintained by a private businessman. He charged a small admission fee for the privilege of visiting the gorge. As it turned out, he couldn’t keep up with the necessary improvements and his small business went out of existence.

Dr. Herbert D. Schenck, M.D., class of 1882, then began a project to open Fall Creek gorge to the whole student body free of charge. As president of the Cornell Association of Brooklyn, Schenck began his project through correspondence with the University in 1905. It resulted in a joint project of the Brooklyn organization and Cornell. Assisted by Professor Willard W. Rowlee of the Civil Engineering department, Schenck started and saw the completion of work that opened a beautiful natural landmark for the Tompkins County area. The alumni-sponsored undertaking, known as the Restoration and Preservation of Fall Creek Gorge, was finished in 1908.

"Early in the school year, when summer heat still burns . . . guys in blue jean shorts and girls in bikinis make their way down the winding paths to the gorge bottom and the pool just below the suspension bridge."

The gorge was a natural haven for relaxation and admiration of the beauty that was inherent to the Ithaca area. As Schenck wrote in correspondence with the University in one of his early letters, “the most feasible object of the Association to undertake for the University at the present time is to once more make Fall Creek gorge available to students.”

Professor Rowlee agreed with him and helped draft a plan to design the gorge areas so that “such work by Cornell men would be appreciated by generations to come.” The plan was to enhance the natural beauty of the gorge while preventing destruction or erosion of the Fall Creek area.

Over the years additional renovations have been made to the project, including the building of steps and pathways. But while these and other improvements have altered the physical appearance of the area, the gorge pool still attracts crowds of swimmers. All it takes is clear skies and a warm sun and the fun begins.
Sound and Symbol of Cornell

by ROBERT SEBRIS

When you are new to Cornell you soon discover that you share an experience common to those around you. Three times each day the chimes of McGraw Tower ring out, presenting mini-concerts of various tunes and traditional Cornell music. The sounds of the bells and the library tower from which they come are part of the sights and sounds all segments of the Cornell community quickly recognize and often long remember.

If you have the energy to tackle the 162 steps to the summit of the tower, you will be rewarded by a fantastic view — especially on a clear day. You can see far down Cayuga Lake, the Ithaca College Campus, and quite a bit of the surrounding landscape. From this lofty height the steep “libe slope” below looks almost level. Cornell is spread out before you. It is a view that has been open to visitors for more than 100 years.

When I made the trek up the tower stairs I talked with Al, a junior in the College of Arts and Sciences. He told me that to produce the awesome sounds that come from above you head the chimesmaster controls the bells from a sturdy wooden frame. It is built with two-by-four’s that support the 36 handles needed to play the chimes. There is an upper row of 18 handles and a lower row of 18 pedals that strike the same notes as the upper row. The foot pedal is used if you’ve been playing at one end of the handles and have to reach a note at the other end. It can be done pretty easily with your foot. The pedals are also necessary for playing chords of three notes.

Leaning on the spiral staircase that takes you to the very top of the tower, I watched as Al performed. It was quite a physical job. Finished, he was sweating through his shirt.

“I play piano and organ,” said Al. “I guess that’s most helpful as background—for the quick movement of the hands and the reading of the music.

“All you really need though is a basic knowledge of music. There are tryouts and basic competition in the fall of every year, which consist of just learning how to play this thing. They run from October through December.”

Al went on, “Right now there are nine chimesmasters. We each play two to three times a week. Years ago, they used to get board and lodging. Today, as payment, we get a dollar a concert. We have to choose from the file that we have here, but we can select songs that we’d like to hear or play.”

In a brochure prepared by the chimesmasters, the bell music is described:

The Cornell Changes, or Jennie McGraw Rag, named for the donor of the original chime, has heralded every morning since 1869. Also played daily are the Cornell Alma Mater at the midday concert, and the Cornell Evening Song in the evening. The latter is often mistaken for a Christmas carol. The repertoire also includes virtually every other conceivable Cornell song.

With the bells right above your head, the noise can be deafening—they can be heard across the campus clanging out their songs. As the chimesmasters wrote,

Despite the care of the chimesmasters, some of the public inevitably complain for one reason or another. Yet they would find something essential missing without that cheery, mellow raucousness which probably distinguishes the Cornell chimes from all others.

I looked at Al. He was still sweating from his impressive performance. He took off the moccasins that he wears to work the foot pedals and he sat down to put on his shoes. As he glanced up with a “not bad, eh?” kind of look, I nodded my head and smiled. It was obvious that he’d had quite a bit of exercise as his hands and feet flew from one handle to another.

There is exercise for you too when you undertake the tower climb. But if you do not see the bells firsthand there is still the music to enjoy and the reality of McGraw Tower. The sound of the chimes and the sight of the tower are Cornell symbols that stay with you for a long time to come.
I'm a ‘City-Aggie’

by JOHN MANGIAMELEI

Ithaca may be a long way from the Bronx, but I'm just one student among many in the College of Agriculture here at Cornell whose previous world has been primarily concrete and steel rather than barns and silos. I'm from New York City, a “city-aggie,” and the only green plants I'd seen were those that had pushed up through the sidewalk in front of Al's candy store at the corner of Baychester and 148th. Then my summer of "work experience" brought me out from behind textbook covers and into the rigors of daily routine on a farm.

The first thing I had to adjust to was getting up before dawn to start work at 6 a.m. My job in the city never started before nine o'clock, so I now had less sleep and more work. Since I was used to working in air-conditioned offices, the opportunity to labor in the fresh country air would have been welcome if it hadn't been for the pollen and hay fever that it brought along — requiring a constant supply of Allerest on my nightstand.

I was out of downstate offices and into an upstate barn — I was now a milker. This was a dairy farm and milking was the most important part of my day. Each cow's udder had to be cleaned before milking. The problem was, I didn't know each cow's individual mannerisms. My introduction to the do's and don'ts of milking came in the form of stray hoofs and swatting tails.

I then began to learn what to look for during heat periods (estrus), as well as observing the time just before parturition (birth). Treating a cow for a bad hoof became almost as commonplace as any office task. I also learned the going price of milk per hundredweight as well as the price of a calf per pound. Knowing each cow and keeping a good record of the amount of milk she gave daily was important in keeping the farm's income as high as possible. I also got acquainted with the bargaining that goes on when a farmer buys or sells an animal.

It was at milking time that social calls were made to the farm. "Jonesie," our neighbor with the familiar red cap, might stop in once again to borrow the manure spreader. A farmer would stop by proudly offering a bushel of his fresh-picked garden tomatoes and cucumbers.

In the afternoon I had the responsibility of cleaning the manure out of the barns. I approached this task with disdain, realizing that one part of the barn had to be done with a shovel rather than by more mechanized means. The rest of the afternoon was spent baling hay, plowing, or planting corn. The only difficulty came in baling, one day when the trip mechanism on the baler broke and the heavy bales had to be lifted by hand. They blistered and cut my hands. Each bale seemed to weigh more and more and more as the hot summer day in the field wore on endlessly and the stacking of the bales in a stuffy barn proved to be at the least dehydrating.

If there was any spare time, there were plenty of odd jobs to take care of: rewiring fences, painting the milk house, or cleaning the bulk tank, all sorts of tasks necessary to keep the barn and equipment in good shape. The afternoon ended with calling the cows down from the pasture, feeding silage, and another milking. Often the little "Cobb boys" would bicycle by on their way home from school and stop in to watch us finish up our chores.

Come bedtime, after a good meal and a couple of hours of television or a casual game of cards, I sure welcomed a good night's sleep. Lying there in bed before an open window, I relaxed, feeling the cool breeze ruffling through homespun curtains. Again the disparity between city and farm life was brought home to me as I realized that the click-click of crickets had replaced the more familiar clack-clack of elevated trains that sounded above the roof-top of my distant city home.

I had been introduced not just to a different job, but a whole different way of life. Milk was no longer just something that came in a carton at the supermarket. I'd had a taste of the work that went into producing it, glimpsed the complicated business of running a dairy farm. I am now back in school with a new appreciation of what farming is, and what it means to be an aggie.
A champion of the sheep industry and friend of many young people has established an endowment fund at the N.Y. State College of Agriculture and Life Sciences, Cornell University.

The $1,000 gift, made by Mrs. Ruth B. Jillson of Jill Acres, West Lake Road, Skaneateles, is the culmination of 35 years of work with sheep — breeding them, showing them at fairs, and giving many demonstrations of carding, spinning, and weaving of their wool at craft shows throughout Central New York.

Show winnings and small honorariums have been accumulated to provide a basic endowment at the College for undergraduate and graduate student research on cancer, breeding, and reproductive physiology of sheep. When $5,000 is accumulated a permanent endowment fund, known as the Sheep Endowment Fund, will be established and the income from it will be used for student research projects.

In addition to the cash gift, Mrs. Jillson gave a Karakul sheep from her now small flock for research studies, and also presented several copies of “The Karakul Handbook” for use in the College’s Department of Animal Science and Mann Library.

Over the years, a few Karakuls have been included in her flock and she has used its long hair in some of her craft demonstrations. The breed, little known in the United States, produces Persian lamb and Broadtail furs, and the wool from which the famous Bokhara oriental rugs were made.

In her efforts to promote the sheep industry, Mrs. Jillson will be remembered by many young people whom she has helped to start sheep rearing projects. Many others will recall their rides in a “sheep cart” devised by her and used at the State Fair to give small children a ride. And a number of her sheep have appeared in nativity scenes at Christmas time.

Though a music major and graduate of Syracuse University, Mrs. Jillson has long been a friend of the College of Agriculture and Life Sciences and has encouraged her young friends to attend the College. She has also been an active member of the State Sheep Breeders Association.

Mrs. Jillson, Skaneateles sheep grower, presents her $1,000 check to Charles E. Palm, former dean of the N.Y.S. College of Agriculture and Life Sciences to establish an endowment fund for research on sheep.
Bailey Chair

Charles E. Palm, who retired June 30 as dean of the New York State College of Agriculture and Life Sciences at Cornell, has been named the "first" Liberty Hyde Bailey Professor of Agricultural Sciences. The State University has concurred in the appointment and will provide the salary for the distinguished professorship. Cornell hopes to establish the Bailey chair as an endowed professorship in Agriculture and Life Sciences.

Palm, who served as dean for 13 years, retired as dean but retains his position as professor of entomology. In addition he plans to continue to serve on committees of the Land Grant Association, to work with the Environmental Protection Agency, and to write on the changes which have occurred in agriculture and how these changes should influence research and extension programs for colleges of agriculture.

"In recognition of these efforts and his past service, the appointment to this chair seems highly appropriate," according to Cornell President Dale R. Corson.

The professorship is named for Liberty Hyde Bailey, who came to Cornell as a professor of horticulture in 1888 and who became dean of the College of Agriculture in 1903. During the 10 years he served as dean, he succeeded in turning the college into a state related unit, the New York State College of Agriculture.

viewed one of Cornell's all-time great teachers, Bailey died in 1954 at the age of 96. Bailey Hall is named in his honor.

Palm has served the Agriculture College for a third of a century – 13 years as dean, two years as director of research and 19 years as head of the Department of Entomology and Limnology.

Hugh Holley, known to students and customers in Cornell University's meat salesroom, has retired after 33 years of service at the N.Y. State College of Agriculture and Life Sciences.

Since starting work in 1939, Holley has worked with a number of students each year, teaching them all aspects of animal slaughtering and meat cutting. In addition, he has taught meat cutting in formal college classes and has demonstrated it around the state and in home economics classes at the Ithaca High School.

Environmental Studies

Professor Raymond C. Loehr, agricultural and civil engineer, has been appointed the first director of the College of Agriculture and Life Sciences' newly established Environmental Studies Program.

Responsible directly to the dean, Loehr, as program director, will serve as the monitor of the College's teaching, extension, and research functions for environmental studies.

He will also serve as liaison with the Center for Environmental Quality Management and related programs of other parts of Cornell and other units of the State University of New York.

Among other duties, the director will serve as chairman of a College Committee on Environmental Studies. To be made up of representatives of the College's departments, the committee will be responsible for assessment of the College's needs and policies and for recommendations concerning them.

In addition, an Advisory Committee will be formed to provide insight into regional, national, and international environmental activities, and Loehr will serve as executive secretary of this body, which will be composed of individuals from the College as well as from other organizations.

A Cornell faculty member since 1968, Loehr teaches both in the College of Agriculture and Life Sciences and the College of Engineering at Cornell, while devoting much of his time to research in the management of agricultural wastes.
Dr. Edward A. Lutz ’31, (Ph.D. ’40) professor of public administration at the College of Agriculture and Life Sciences has been honored with the Distinguished Extension Program Award of the American Agricultural Economics Association at their recent meeting in Gainesville, Florida.

The overall objective of Lutz’ award-winning Extension program is to achieve by educational means better coordination and direction of diverse county agencies and departments in county governments of New York State.

This extension program was conceived by Prof. Lutz and is being carried out with the cooperation of Cornell’s School of Industrial and Labor Relations, Graduate School of Business and Public Administration, and the Department of Agricultural Engineering.

Dr. Earl W. MacArthur ’50, (M.S. ’54, Ph.D. ’71) a native of Deposit, N. Y. was recently named President of Canton Agricultural and Technical College, succeeding Albert E. French, (M.S. ’47). Since 1966, Dr. MacArthur had been Director of Continuing Education at Delhi ATC and prior to that was high school principal at Delaware Academy and Central School in Delhi.

Laing E. Kennedy ’63, has been named assistant to the dean at the College of Agriculture and Life Sciences. He began his new duties as assistant to Dean W. Keith Kennedy in mid-September and will be working with the College of Agriculture and Life Sciences Fund. He replaces Richard A. Church ’64, formerly assistant to Dean Palm and fund co-ordinator, now Assistant Director of Admissions for the College. Kennedy will also coach freshman hockey at Cornell.

Dr. Robert S. Smith ’49, (M.S. ’50, Ph.D. ’52) professor of farm finance at the College of Agriculture and Life Sciences was selected to receive the Professor of Merit Award.

This award is presented annually by Ho-Nun-De-Kah, Senior Honorary in the College, following a ballot by the graduating seniors.

Open House

On Saturday November 11, the College of Agriculture and Life Sciences and the College Alumni Association will co-sponsor an Open House for high school students.

The program will begin at 9:30 a.m. and will feature tours of college facilities, information about admissions to the college, academic programs and career opportunities, and a student panel concerning student life on campus.

Alumni assistance is needed in locating good prospective students and in transporting them to campus. For further information contact Albert Louinsbury, Alumni Association President at 87 Church Street, Saratoga Springs, New York 12866 (518-584-4768) or Richard Church, Alumni Association Secretary, 195 Roberts Hall, Ithaca, New York 14850 (607-256-2057).

Ag Fund Reaches $655,000

As of September 1, current pledges to the College of Agriculture and Life Sciences Fund now total over $655,000. Breakdown of this total falls into the following categories:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
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<tr>
<td>Major gifts — ‘FRIENDS’</td>
<td>$159,500</td>
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<tr>
<td>General Alumni gifts</td>
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<td>Memorial and Scholarship</td>
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<td>Endowments</td>
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<td>Corporate and Foundation</td>
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Five New ‘Friends’

Over the summer, several more have become Founder Members of the ‘FRIENDS’ of the College group:

Jesse Bontecou — Rally Farms — Millbrook, N.Y.
John J. Sullivan — ’62 LeRoy, N.Y.
Richard C. Call — ’52 Batavia, N.Y.
Robert V. Call, Jr. — ’50 — Batavia, N.Y.
Mr. and Mrs. Sayre MacLeod — Sayre Farms, Phelps, N.Y.
Welcome
New Students

W. Keith Kennedy, Dean
New York State College of Agriculture
and Life Sciences

This word of welcome is extended with pleasure to all of you, to those who are here directly from high school and those of you who have transferred from other colleges. This welcome is also extended with the anticipation that your entry into the New York State College of Agriculture and Life Sciences is the beginning of an exciting experience, a new world of learning and enrichment to be explored and developed through the many fine educational opportunities Cornell offers. You will soon discover that the College is an important and integral part of the University's structure, functions, and facilities as well as its community life and activities.

Its dimensions in terms of outlook and purpose were updated a short time ago with a name change from Agriculture to Agriculture and Life Sciences. Through this State Legislature action, recognition was given the College's century of innovation and achievement. At the same time the change points up the vital contributions the College makes through its teaching, research, and public service programs in supporting a thriving, broadly-based agricultural complex fundamental to the well-being of all citizens. Indeed, the College has greatly expanded a focus formerly fixed primarily on the needs of production agriculture to encompass wider horizons across many fields that challenge and utilize our resources for an ever-increasing number of people.

A case in point is our commitment to environmental improvement. Problems of deteriorating air, water, and land assets are well recognized. We must seek solutions head-on. Steps are being taken, I am happy to report, to give environmental questions the attention and priority they deserve. Recently, for example, we consolidated these concerns into a central operational plan. Now we are in a better position to bring manpower and material resources more effectively into balance with the College's potential to direct efforts toward the problems of environmental quality.

Certainly you will have many worthwhile experiences as your educational program unfolds. Keep in mind that your faculty adviser stands ready and able to help you in this endeavor. Get to know your adviser as soon as convenient. Don't hesitate to call for assistance whenever questions arise. We are proud of the contributions the College's faculty advisers make to student growth and development. We are confident you will soon know your adviser as a friend and counselor working in your best interests.

We share your desire to obtain the best possible education. The faculty and the administration of the College want to help you attain this objective. Much of our future success will depend on making the best use of our time and talents and the many opportunities available at this great University.

In this spirit of mutual interest and the expectations that accompany a wholesome striving for achievable goals, welcome to Cornell!
ON THE COVER – The nippy air of November increases the appetites of these students enjoying a day’s outing along the Finger Lakes Trail. Cooking lunch at Shindagin Hollow lean-to provides a rest period under tall pines and hemlocks in one of the Ithaca Region’s numerous glens. The nearby miniature gorge that is part of this picturesque setting invites exploration. Its small creek sends out musical messages as the falling upland waters splash and tumble over ledges and logs. Otherwise the woods are quiet. Except that now and then the silence is broken by the chatter and laughter of hikers along the trail. But soon their voices fade. And once again the woods are still.

PICTURE CREDITS
Cover – Cornell Countryman; page 5, 7, 8, 9, 10, 11, 12, 14 – Todd Duncan; page 13 – Kristi Rohlf; page 6, 16 – Department of Communication Arts; drawings page 7, 13 – Jill Williams. The Countryman staff appreciates the cooperation and special assistance of Mr. Donald Kenyon, Orchard Manager, Department of Pomology, in the preparation of the photo feature on pages 8 and 9.
Serving the People

Failing the People, a critical report on the New York State College of Agriculture and Life Sciences, was released this summer by the Agricultural Policy Accountability Project, an independent group based in Ithaca, New York. The following article is a condensed version of the College's official response, entitled Serving the People. It highlights some of the ways in which the College is, indeed, assisting people throughout the state, and ways in which the College expects to continue to help improve the lives of people who live in rural areas.

Taking service as the theme, the articles in this issue of the Countryman focus on various aspects of the College where a direct service is offered to the people.

A document such as Failing the People needs to be assessed on the basis of its original context. It is not simply an attack on the College of Agriculture and Life Sciences and Cooperative Extension in New York State. It is a part of a much larger effort by a segment of our society who believe that the corporate structure has taken over agriculture and has stressed technological advance, to the almost total neglect of the human factors. The report claims that College policy overemphasizes production agriculture and excludes proper recognition of social problems, particularly concern for the family farm and the rural people who, according to the report, are hurt by big agriculture.

The College administration regrets that Failing the People includes many inaccuracies, half truths, and attacks on dedicated individuals, but it acknowledges that the document points out certain shortcomings and new challenges.

When Cornell University opened its doors in 1868, three out of four people in the United States were living on farms and producing the food and fiber for a growing nation. Farm life was one of drudgery and uncertainty, where low yields, crop failures, and poor animal performance were commonplace.

Initially, the mission of the College was to train sons and daughters of farmers and of other working people. The faculty soon realized that basic information and knowledge were lacking—thus, research in agriculture was initiated. As new information was gained it was taught not only to students on campus, but also was disseminated to farmers through meetings, farmers institutes, bulletins, and later through the agricultural extension service. This information was available to all who chose to use it.

Increments of knowledge were gradually added in many fields such as genetics; animal and plant breeding; nutrition and food science; soil, crop, and animal management; fertilizer technology; farm credit and business management; improved pest control; improved herd health; and agricultural engineering. Each of these areas contributed in making small advances in the improvement of agriculture, but overall progress was relatively slow until the 1940s. Output per acre, per animal, and per man has increased dramatically over the past 30 years. The result has been that the cost of food, in terms of hours of work, is lower in the United States than in any other nation in the world. Low-cost food benefits everyone, but most of all people with lower incomes. In addition to its low cost, food now is of better quality, has longer shelf life, is available in greater variety, and in many cases, such as enriched bread, is of higher nutritive value than it was 30 years ago.

By application of the available information and technology, family farms in New York have been able to remain in business in the face of stiff and continuing competition from other regions. More than 95% of the agricultural production in New York comes from family farms. In addition to producing food efficiently, these farms have provided an improved standard of living and a satisfying way of life for the operators and their families. These family farms are not likely to be displaced in the near future, but may decrease in number as the older generation retires and some operators choose other occupations.

Gross sales from New York farms exceed one billion dollars annually, and the Empire State ranks 16th in the nation in the value of its farm production. It is estimated that the total contribution of New York agriculture to the state's economy is 4½ billion dollars annually. Without the continuous improvement and application of agricultural technology, the economic position of New York farms and related industries would deteriorate, and an important segment of the state's economy would be lost to other regions. If this should occur, the problems in rural areas in New York would be intensified.

Increasing agricultural production through research and extension has not been the sole mission of the College. The greatest accomplishment of the College has
“Mechanization has contributed to the displacement of people from farm employment, but returning to the back-breaking drudgery of tasks that can be mechanized is not the solution.”

been to provide an education for young people, many from small farms and low-income families. Most of these students have been New York State residents, but a significant number have come from other states and countries. They have not only benefited personally from their education but also have helped countless others to improve their agricultural practices and have shown rural people in New York State and throughout the world how to raise their level of living.

The College has continued its early concern for the betterment of the rural communities. It contributed to the establishment of centralized school districts throughout the state. It also helped in the development of science education programs for rural schools. Through extension education, rural New Yorkers have been better informed about public issues, business practices, legal problems, and farm safety. Help has been given to rural communities on the problems of health services, fire protection, roads, electrification, water supplies, and sewage systems. The College has worked to make the benefits of old age and survivors’ insurance available to those in agriculture.

It must be recognized that the land resources of New York State vary from poor to excellent. Many acres once farmed in New York State are unsuitable for a modern, highly competitive agriculture and are no longer used for this purpose. The College has helped some owners of the poorer land to develop it for commercial campgrounds, hunting and fishing preserves, Christmas tree or maple syrup production. But in many cases the land is not suitable for a satisfactory economic enterprise and has value only for personal use and enjoyment.

The tremendous advances in agricultural production have released large numbers of people from the primary role of producing foods. These people in turn have made it possible for this country to make unparalleled progress in terms of producing the goods and services needed for an improved standard of living and rapid socioeconomic development. These accomplishments, however, have had adverse effects in at least two areas — environmental quality and the dislocation of farmers and other agricultural laborers.

The concentration of animals, the intensive use of fertilizers and other agricultural chemicals, and the increased size of food-processing plants have caused pollution or posed a threat to the quality of the environment. In response to this, the College has directed its attention to finding alternative methods for controlling pests. It also has given attention to the handling and safe disposal of animal and other agricultural wastes.

Improvement of the quality of the environment requires the development of new scientific knowledge and its application to specific physical and biological aspects of the problems. Within the past month, the College has appointed a director responsible for developing a major research and educational program in environmental studies.

The causes and solutions of social and economic problems of rural areas are extremely complex and extend well beyond the boundaries of agriculture and the expertise of the College. Mechanization has contributed to the displacement of people from farm employment and has caused the problems that go with job relocation. Some farm people have found work in related agricultural services or industries in rural communities, while some have found employment in different areas. Still others, especially the seasonal laborers and those with little training or experience, have found job relocations more difficult, partly because of the current rate of unemployment. Returning to the back-breaking drudgery of tasks that can be mechanized, however, is not the solution.

Many of the socioeconomic and poverty problems of rural areas are not exclusively associated with agriculture. Problems related to such things as underemployment, crime, drugs, inadequate education, poor nutrition and lack of health and legal services confront both urban and rural areas. The College does not have the necessary array of specialists to work on all these problems. Solutions will be found in the joint efforts of many disciplines. Rather than duplicate the resources already available in the College of Human Ecology, the School of Industrial and Labor Relations, and other units of Cornell University, the College of Agriculture and Life Sciences is seeking the cooperation of faculty from these units. It also will continue to allocate a greater percentage of its resources to educational and research programs for the social and economic development of rural areas.

Even though there are no easy solutions, the College is not turning its back on problems of poverty, unemployment and under-employment in rural areas. Work in these areas will continue.

In looking to the future the College can best serve society by: continuing to provide excellent undergraduate and graduate education in the agricultural, biological, and social sciences to all interested persons; helping to insure through research and extension the efficient production of a wide variety of safe and nutritious foods at reasonable cost; continuing its efforts to protect and improve the quality of the environment; and cooperating with other units in the search for solutions to the complex social and economic problems of rural people.
There's A Spider
In That Box!

by SUSAN SOROZAN '73

The pretty young secretary was busy opening up mail for her vacationing boss. As she tore open a large yellow envelope a small, gray cardboard box dropped out. Curious, she undid the tape around it. Eagerly, she opened the box. Inside sat a huge black spider atop fluffy white cotton and looking as if it were ready to jump out at her!

“That gave me quite a start although I quickly realized it was dead! I doubt that Carolyn would have been affected at all, though!”

Her observation is probably very true. Carolyn Klass, a vivacious and petite strawberry blond, has been working as technician for the Insect and Plant Disease Diagnostic Laboratory since it was founded in November of 1971. Packages containing dead spiders as well as many other types of insects and plant disease specimens arrive at her office daily from all types of people living throughout New York State. Along with these packages come requests like: “What is it?” and “How do I treat the plant disease?” Or, some more specific questions might be asked, such as: “Will the kind of pesticide I’m planning to use be the correct one for the job it has to do?” Often, just letters will arrive from home owners. Some are in search of ways to rid themselves of the fleas the family dog or cat generously brought home to them. Others, perhaps, are trying to find out why their house plants aren’t growing properly.

If more information is needed to answer the questions or if extensive culture work is being done on the sample submitted, the resident is notified accordingly. If she can handle the problem with the description given or the sample sent to her, Carolyn will manage procedures herself. Then, after diagnosing the plant disease or the nature of the insect pest in her laboratory, with the help of a graduate student assistant, Carolyn can simply send one of the over 700 leaflets prepared by plant pathologists and insect specialists teaching in the College of Agriculture and Life Sciences at Cornell. These leaflets describe the disease or insect and give instructions on how to handle the problem with chemicals and, when possible, in a natural way. Accompanying these Cornell-compiled leaflets are control sheets describing New York State regulations on pesticide uses and any other materials that would possibly be relevant to the diagnosed problem.

If, however, her wide knowledge of both plant diseases and insect pests isn’t sufficient for solving a particular problem, Carolyn can bring the specimen and questions to one of the many plant pathologists and insect specialists teaching in the college and available to help her.

The arrangement is quite an improvement from the time, a year ago, when samples and questions from state residents and county extension agents were sent to whoever in the college seemed likely to provide a reply. Often letters and samples arrived addressed to such indefinite places as Bug Department or the Ag School! Consequently, in past years, these samples and requests would often spend several weeks in the on-campus mails going from one office to another until the right person was reached. Now the valuable time once lost due to lack of a centralized diagnosing facility has been saved by the Diagnostic Lab and Carolyn’s diligent work.

Of course, there are compensations for her diligence. The long hours spent in laboratory routine procedures are more than offset by the interesting and wide variety of questions asked, samples sent, and people writing. And, many times, the problems are quite challenging! For example, half the requests received are from extension agents already trained in diagnosing and treating common home and garden problems. Consequently, the samples they forward to the lab are out of the ordinary.

When a New York State resident sends a sample directly to the lab it is often a common enough problem to a trained specialist. But, then, the interest of the job lies not so much in the samples as in the sender! Many home owners send long, detailed descriptions of observations they made of the plant or insect that must have taken hours to compile, are amazingly accurate, and are quite intriguing! Sometimes children will send samples or write in enthusiastically asking for information about their exciting discovery and wondering if it is some rare or never before seen species. Adults sometimes add humor to the daily routine. Once, not too long ago, a concerned American tourist shipped a whole souvenir Philippine cricket cage to the Diagnostic Lab when she
saw dust rising from the wooden box and noticed vibrations; it turned out to be Philippine "Termites"!

Although humorous, these and other similar requests are happily showing that the Diagnostic Lab is serving the people for whom it was founded. While large commercial farmers are not barred from its free services, the Diagnostic Laboratory, according to Lab Project Leader Professor Arden F. Sherf of the Department of Plant Pathology, "primarily a service for non-commercial agricultural people." In the year that it has been in operation the lab has answered approximately 1,600 queries from urban and suburban residents of New York State and extension agents serving those areas.

Such a large turnout has kept Professor Sherf, who has pledged to devote 20% of his on-campus time to directing the lab, quite busy in aiding the establishment of the lab and working with the steering committee. This committee, meeting periodically to set lab policy, consists of professors from the College of Agriculture and Life Sciences' departments of entomology, plant pathology, vegetable crops, pomology, floriculture and ornamental horticulture, natural resources, agronomy, and extension administration. The members' interest in this project mirrors the deep concern of the faculty from the departments of entomology and plant pathology. These departments, deeply aware of the need for just such a service, offered housing, equipment and manpower to the cooperative extension funded project. They insightfully realized that the main audience to be reached through the project would be those very people who had never even heard about extension services and, consequently, had never received any of the help with the problems of insect pests and plant diseases that home owners are constantly being faced with.

Have you ever heard of the diagnostic lab? Perhaps not. But Professor Sherf can foresee a day when many more residents will be using the facilities; "These things do have a way of snowballing!" And the lab already has been forced to print up a procedure sheet describing how to collect and package samples. This sheet has been sent to many residents who have become "regular users" of the lab. While no plans are presently being made to enlarge the operation, there may come a time in the not-too-distant future when the topic will have to be discussed by the steering committee.

Until then all involved in the only operation of its kind in the country will busily continue their duties. The steering committee will continue to set policies for new problems as they arise. Professor Sherf will continue in his efforts to effectively implement these policies. Carolyn Klass will contend with the growing numbers of requests in her laboratory. And, her secretary will forever more be leery about opening up little, gray cardboard boxes!

Alumni Honor Prof. Stan Warren

Over 150 alumni and friends were in attendance recently when Professor Stanley W. Warren was honored by the Alumni Association of the New York State College of Agriculture and Life Sciences at their annual Alumni Breakfast.

Ralph Winsor '57, past president of the Alumni Association, expressed appreciation for Professor Warren's many services to students and farmers alike, and for his service to the Association as secretary or secretary-treasurer for 12 years. He presented him with a collection of letters from alumni (mainly his former students) and a plaque with the following inscription: "Few men indeed have touched the lives of so many; few have given so much of themselves." Professor Warren spent four decades at Cornell teaching farm management to over 7,000 students.

Former Dean Charles E. Palm paid tribute to Professor Warren, "His keen sense of humor, coupled with his devotion to scientific inquiry and its practical application, endeared him to students over his long teaching career. His outstanding service to the Alumni Association is deeply appreciated. The College will miss him as an active member of its faculty, but we are delighted that he will be around Ithaca in the years ahead, and we hope he will continue to spend some time with us."

Ralph Winsor, '57, presents Prof. Stan Warren with a collection of letters from former students at the recent Alumni Breakfast.
Soil Never Had It So Good

by GERALD GUNKEL '73

Why on earth would you want to test soil? The most obvious answer to a farmer is that healthy soil yields a higher profit per acre.

But good soil analysis can also help prevent agricultural pollution that may occur through the build-up of chemical nutrients.

These are two reasons why the Department of Agronomy in the College of Agriculture and Life Sciences operates a soil testing laboratory. Located in Bradfield Hall, the laboratory is under the direction of Professor Douglas J. Lathwell who works closely with Cooperative Extension agents in providing an analysis service for farmers in New York State.

When farmers or county agents submit soil samples, the Soil Testing Laboratory routinely conducts a series of tests to gauge the soil's acidity, available plant nutrients, and its percent of organic matter. The purpose of such tests is to help judge the fertility of the soil and subsequently provide a farmer with information for a field's fertilizer requirements.

Important to the fertility of a soil is its pH level. Available phosphorus and potassium content are also characteristic of soil samples tested. Occasionally, special tests are run for calcium and magnesium content. These components determine the quality and quantity of fertilizer and lime required for a healthy soil.

Amounts of fertilizer and lime needed vary with the quality of the soil and the crop which is to be grown. Acid soils, for instance, require lime to neutralize the acidity, the quantity depending on how acid the soil is.

The quality of the fertilizer, on the other hand, is represented by the balance of nutrients in the fertilizer. Nitrogen, for example, seems to produce the quickest results when applied to soil via commercial fertilizers. Although nitrogen encourages vegetative growth, an oversupply can cause too much growth and consequently weaken maturing plants. This has an adverse effect on vegetables, fruits, and grains. Occasionally, special tests are run for calcium and magnesium content.

Once the soil has been analyzed, the Soil Testing Laboratory sends the results to the county extension agent who makes the recommendations for lime and fertilizer application because, according to Professor Lathwell, "The agent can advise the farmer more directly since the agent is usually more aware of on-the-ground situations and problems." The Soil Testing Lab at Cornell cannot oversee each field in the state, and it is up to the extension agents to see that the needs of the area farmers are met.

Sometimes, too, it is more than the content of the soil that is a problem. As Professor Lathwell points out, "Many times it is not just the soil that is poor, but also the combination of insects, diseases, and poor drainage of the fields. To have a healthy crop you need the proper fertilizer for your conditions, a good soil and water management program, and efficient weed and pest control methods."

An important side effect of making use of this service is that the farmer becomes less of an ecological hazard. Good soil practices, such as those advised by the extension agent, based on soil test results, help keep nutrient loss to a minimum. This means there is less waste of soil nutrients and less need for chemical additions by man-made fertilizers. Good soil practices include applying fertilizer as close to the growth time of a crop as possible and using manure instead of a large quantity of artificial fertilizer. By keeping nutrients in the soil, the farmer helps prevent agricultural pollution.

Cornell's Soil Testing Laboratory runs from 2,000 to 5,000 soil samples per month for New York farmers during the early spring and late fall months. The cost for this service is two dollars per sample box. Special tests cost a little more. This price, however, is insignificant for information that may contribute to higher crop yields and decrease excessive nutrients. The end product is an enriched soil and a healthier landscape.
Over the last seven weeks enough apples have come out of the Cornell Orchards to fill an eight-foot deep Olympic swimming pool!

Twenty thousand bushels are picked annually by a mixed force of Cornell students and outside help in a period spanning September and October.

The Orchards cover 75 acres in the Ithaca area, and produce 35 varieties of apples. After the apples are picked, they are trucked into the processing plant where they run along a rack and are graded for size, color, and sent off to one of the "goodies" About eleven 7,000 bushels cold storage A primary research, for mutation, and several students, the place to go
ripeness. "Bad apples" are put side to make cider, while the are packaged and crated for sale. en thousand bushels will go into be sold over the winter, but els are sold directly to the Cor-unity every fall.

inary activity of the Orchards is different strains of apples are tested nion, pruning, ground-cover effect, other factors. However, to most Cornell Orchards is just a good some apples. They're right. It is.
This past summer millions of Americans witnessed one of the most severe natural disasters in modern times, hurricane Agnes, which ravaged much of the northeastern United States. During the course of the storm many different groups mobilized themselves to assist in the flood relief, among them Cornell’s Cooperative Extension. Personnel from both the College of Human Ecology and the College of Agriculture and Life Sciences had a key role to play.

Most people think in terms of pure physical assistance when a natural disaster occurs, but in reality relief goes far beyond that. After the damage has been done, there is the crucial need for a realistic evaluation of existing problems and practical information on how they may be best solved. This was the heavy task undertaken by Cornell Extension. Within hours after Agnes struck, a special college disaster coordinating committee was named by Edward H. Smith, director of Cooperative Extension at Cornell, to assemble information. (Committee members were Howard Matott, chairman; Dale Brown, Edward Foss, and Robert Ames from the College of Agriculture; Mary Wood, and Carolyn Boegly from the College of Human Ecology.)

It is impossible to determine the exact quantity of information that passed from the committee to Cooperative Extension agents in the twenty-six disaster counties and then on to the people. Initially agents were alerted to two resources already in their hands, The Disaster Handbook For Extension Agents (sent May 11, 1971) and the Flood Information Kit, which was compiled by the College of Agriculture and distributed in March, 1970. After that, information came from every source imaginable. On June 25, Associate Director Shirley White called Kansas State University to obtain permission to reprint the Kansas publication Decrease Loss and Damage From Floods. Permission was granted and within five days, 25,000 bulletins were indeed reprinted and delivered to County Cooperative Extension offices by car. These publications were immediately distributed to evacuation centers.

Faculty members inside and outside Extension in both Human Ecology and Agriculture were extremely important resources. Materials they provided on discerning edible foods, purification of water, furniture restoration and handling of swamped motors and electrical devices were translated into written form and also broadcast over emergency radio stations in Horseheads, New York. Printed materials were left in evacuation centers, grocery stores — wherever people might be able to reach them. The USDA bulletin, First Aid For Flooded Homes, was passed out in large numbers and also a bulletin reference list, citing everything that was available.

This intense kind of activity lasted only a short time, but information gathering and distribution continued through the summer months. During the week of July 10, the role of Extension was expanded. Special one-stop information centers were set up which serviced eleven counties. In addition, the Office of Emergency Preparedness in an effort to reach all portions of the population, placed full page ads in key newspapers in the twenty-six official disaster counties which gave directions for contacting the Extension office.

Today, the Cooperative Extension Committee is working harder than ever at flood relief. Of the situation at hand, Robert Ames has said, “The flood itself was only a very small part of the disaster. In the first forty-eight hours we worked to save lives. Now that the water is gone, the problems are much more complex.

“The farmers will have to learn how to adjust farm practices to what they now have left. This could mean anything from loss of topsoil, eroded fields, to unwanted soil deposits and debris. Livestock is another difficulty. Those who have animals are tangling with the problem of feeds. Many have been forced to use low quality feeds or smaller amounts of them, and they have had to harvest crops that ordinarily wouldn’t be cut. Even more critical is the problem of the farmer who has had to decide whether he can continue to farm at all.”
Carolyn Boegly, who has dealt with the situation from another viewpoint, pointed out that families are faced with many personal and financial decisions. Daily living must now be adjusted to the confines of a mobile home for more than a few families. Further complicating matters is the lack of transportation.

"Homemakers are finding it difficult to do weekly shopping and more children must be bussed to school," she said.

But both Professor Ames and Professor Boegly agree that the biggest obstacle for Extension efforts now is the fact that people are at varying levels of need. The storm affected everyone differently, and while some families are well on their way to recovery, others, who have lost everything, still have the hardest part ahead of them. Information processing still goes on, but presently this task is just as complex as the problems being handled.

People outside of Extension including both faculty and students, are continuing to contribute time and energy to flood recovery. Roy Colle, associate professor, Communication Arts, has been instrumental in organizing student groups to do some of the hard physical work still needed to ready homes before the heavy snows come. Alice Davey, associate professor, Community Service Education, is using members of her course, "Decision Making in the Family," to assist families in getting the information they need to solve certain problems.

Many months from now some families will be back on their feet again. Some families will take years, and some will always suffer because of this tragic quirk of nature. Cornell Extension members who have served the people so well all these months can be counted upon to be there long into the future.
supervises the farm practice classes, coordinates the work experience program, and counsels students regarding job opportunities and placement.

The Student Service Center staff wants to begin early in the undergraduate program introducing the many fields a student may wish to pursue and providing the opportunities the student needs in making his decisions. To a great extent much of this information is easily accessible in the center’s library. In addition, the Student Service Center runs a placement service for seniors with a "sign up" policy, allowing them to participate in any on-campus interviews and to be referred to specific openings. Although such on-campus interviews occur throughout the year, they will be particularly frequent during February and March.

The College of Agriculture and Life Sciences provides 250 faculty advisers for the students, however, these advisers cannot handle all of the problems with which they are confronted. A main purpose of the Student Service Center is to aid students when they feel they need to turn to another source for advice. For specific questions concerning various departments, each of the departments in the College has a faculty representative to whom staff members of the Student Service Center and faculty may direct the indecisive student. The department representative will help the student decide if he belongs in a particular department. If that is the case, he will assist the student in finding an appropriate faculty adviser to handle his needs.

The center does not wish to work only as an organization in conjunction with the faculty advising system. The organization will also be a link between the professional and academic worlds. Recruiters will go to the Center looking for qualified candidates to fill positions. The Center anticipates having a strong correspondence with fifty to sixty companies and materials on hand relating to all other professional work. The staff is prepared to help find summer work for undergraduates as well as permanent jobs for graduates. Furthermore, the Center’s services are open to Cornell alumni from the College of Agriculture and Life Sciences, especially during the graduate’s first five years away from the Alma Mater when he is apt to be most mobile and indecisive in his job-searching.

The Student Service Center wants to develop an atmosphere where communication and understanding will freely flow between the students and staff. They wish to destroy the age-old negative image of work requirements which are practically obsolete, and build a new positive attitude toward combining practical experience in one’s field with the academic learning. The Center is introducing a new dimensional approach by trying to coordinate both styles of learning. Students should feel free to drop in any time to browse around. There will be someone available with whom to rap; appointments are unnecessary.

Cornell Ag students now have a place to go for career information and guidance.
Did you know that Queen Anne’s Lace, a wild plant found in open fields and along roadsides, was probably not named for Queen Anne at all? In fact, the plant, known also as wild carrot, is not known by that name at all in England. There are many conjectures as to the derivation of that name, but its exact origin is unknown. It is possible that it is a distortion of an Indian name.

This was one of the interesting bits of information turned up by Professor Peter A. Hyypio of the Liberty Hyde Bailey Hortorium while he was working on one of his latest projects. Every year, Professor Hyypio handles some 1,000 requests for information about plants which are received by the College of Agriculture and Life Sciences. Most of the inquiries arrive in the mail, accompanied by the actual specimen to be identified or, in some cases, by a careful description of one.

Professor Hyypio’s office is in the Bailey Hortorium, which is located on the fourth floor of Mann Library. In his work he has at his disposal the vast resources of the Hortorium, including a library and an extensive collection of specimens. Many plants received by the Hortorium for identification are dried and preserved through a special process and, after they have been identified, are filed for future reference.

Sometimes, the inquiries involve more than the identification of a plant. The information about Queen Anne’s Lace was unearthed while Professor Hyypio was gathering information about the derivation of common names of various plants. In researching another question Professor Hyypio found that the so-called “air ferns” advertised in mail-order catalogues as needing neither soil nor water to survive are actually not plants at all, but are animal exoskeletons which have been dyed green.

The only problem which has been left unsolved is one involving, of all things, a Mexican parrot. Professor Hyypio was asked to analyze a fibrous material which lined the bird’s gizzard, but has so far been unable to identify it.

Most of the inquiries received by Professor Hyypio are not as unusual as these, however. One of the most common requests involves weed identification. Information about the exact identity and life cycle of a weed is invaluable in the effort to control it. Much time and money can be wasted on futile efforts to control a weed without such knowledge.

Another recurring request is for information about poisonous plants; is a certain plant poisonous, or edible, or neither? Wildflower gardeners and enthusiasts also make frequent use of the service offered by the Hortorium. Professor Hyypio often receives questions about the identity of plants seen at fairs or used in dried arrangements. He has also received many inquiries about marijuana, although only about five real specimens have turned up. Most people, says Professor Hyypio, are unwilling to mention marijuana directly, but ask in a rather roundabout manner. The appearance of the specimen about which they have inquired usually makes their suspicions perfectly clear. He has even received cigarette butts for analysis!

Most questions arrive during the summer months when plant life is most abundant, and about half are from private individuals. For the most part the remainder originate with New York State agencies or with county extension agents.

So, if one day you should stumble upon some mysterious plant which you cannot identify, you might want to take advantage of this service supplied by the College of Agriculture and Life Sciences through the Bailey Hortorium. Professor Hyypio will be glad to help you solve your plant mystery.
Effective bulletin distribution depends on an adequate supply to meet the numerous requests from across New York State.

Margaret Weigand sits down to her desk on a weekday morning and scans a stack of letters just plopped in her incoming box. "Dear Sir, I am in the second grade," reads one message scrawled in thick, black pencil, "and we are studying about birds and wildlife. Please send any free information you have as soon as possible." A letter from an elderly gentleman says, "I'd like the bulletin entitled 'Your Way To Quicker Meals.' My meals are two kinds of duck: duck in and duck out!" Still another is a neat, hand-written eighteen-page letter from a lady who loves growing flowers so much she wrote eighteen pages of description just to request one pamphlet on flowers.

"These requests are just a few of thousands we receive yearly here at the mailing room," Mrs. Weigand explains. As supervisor of the Communication Arts Publications Mailing Room in Building 7, Research Park, Mrs. Weigand and an able staff of six send bulletins and other materials to people in many varying occupations throughout this and other countries. It's no small task. Lately the number of publications sent out has averaged over two million yearly.

Bulletins are one of the methods by which land grant institutions such as the New York State College of Agriculture and Life Sciences and the College of Human Ecology extend knowledge and service beyond campus boundaries. There are three main series of bulletins aimed at audiences with a wide range of occupations and interests. Some bulletins cost a few cents while others are free to New York State residents.

If you are interested in downright practical, useful information on a wide variety of topics, then the series aptly entitled Information Bulletins is the one for you. Bulletins from the College of Agriculture and the College of Human Ecology are contained in this series and cover hundreds of titles. Helpful tips on everything from "Facts About Underfashions" to "The Climate of Ithaca, New York" are available.

Other series that cover different areas are also kept in ample stock. Search is a series covering studies that are technical in nature. Much research done at the Agricultural Experiment Stations here and in Geneva is published in these bulletins. If you're interested in "Carrot Rust Fly and Its Control," Search has the answer.

Another series quite technical in nature is entitled New York's Food and Life Sciences' Bulletins. These presently deal with the more technical aspects of food processing and related areas. Researchers and those in the food business are more likely to use them. It is expected that in the future, other departments will publish in this series on non-food related topics.

As one might guess, this tremendous number of publications requires a large storage facility along with careful filing procedures with regular inventories. Miss Blanche Symons, supervisor of the Communication Arts Distribution Services Section, and thirty-year veteran at the business, constantly monitors all facets of the distribution operation.

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<th>Ag Fund</th>
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<td>Pledges to the Fund, as of October 1, 1972, now total over $727,000.00. Recent gifts to the Fund include:</td>
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<td>Alumni and Faculty gifts</td>
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<td>Matching Gift from the Prudential to Mr. Sayre MacLeod's gift</td>
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<td>Bequest from the Estate of Anson Rowe (to be an annual gift for scholarships)</td>
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<td>Total added to Fund since September 1, 1972</td>
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Professor Durfee Retires

Prof. Arthur E. Durfee, a long time administrator of Cooperative Extension and a faculty member of Cornell, retired on October 3 after a 32-year career in extension work.

On the staff of Cooperative Extension since 1955, Durfee served as assistant director and later as associate director – the position he held until 1970. During the past two years, he has been in charge of personnel and staff development.

In addition to his extension duties, Durfee, through the years, taught courses in administration, extension methods and procedures, and adult education programming at Cornell and at several other institutions.

Born in Wood River, Neb., Durfee moved to Oswego in 1935. He received his B.S. degree from Cornell in 1940 and M.S. in Agricultural Economics from the University of Maryland in 1949. He obtained his Ph.D. from the University of Chicago in 1956.

New Associate Director

Prof. William G. Merrill, Cornell animal scientist, has been named associate director of Cooperative Extension by Edward H. Smith, director of extension. Merrill will assume his new post on March 1, 1973 following six months sabbatic leave. He has had wide experience in extension, teaching, research, and administration since joining the faculty in 1959.

Natural Resources

W. Harry Everhart, professor and fishery specialist at Colorado State University, has been named chairman of the Natural Resources Department at the College of Agriculture and Life Sciences.

Everhart has supervised the fishery major at Colorado State University. He has also had an academic post at the University of Maine and an administrative position as chief of the fisheries division, Maine Department of Inland Fisheries and Game. Everhart received his B.S. degree from Westminster College, New Wilmington, Pa. and his M.S. degree from the University of Pittsburgh. He was awarded the doctorate from Cornell in 1948.

Team Takes Second


Losing by 21 points to the team from the University of Maryland, the three-member Cornell team scored 2,305 points. Eleven teams competed.

Coached by Prof. George W. Trimberger, animal scientist at Cornell, the team placed second in judging four of the five dairy breeds and fifth in judging Guernseys.

Food Science

Professor Richard A. Ledford has been appointed chairman of the Department of Food Science at the College of Agriculture and Life Sciences. His appointment was effective October 1.

At Cornell, Ledford teaches a course in food analysis and studies various aspects of milk proteins, antibiotic residues, and pesticide residues.

Ledford was born in Charlotte, N.C. and received his B.S. and M.S. degrees from North Carolina State University. In 1962 he was awarded the Ph.D. degree from Cornell.

He was director of the New York State Food Laboratory before coming to Ithaca in 1964.

Alumni Affairs

Don J. Wickham ‘24 Hector, N.Y., has been elected Trustee Emeritus by the Cornell University Board of Trustees. He had served as ex-officio member of the Board since his selection as Commissioner of the New York State Department of Agriculture and Markets in 1959, until his retirement from that post on June 30. He is also a past president of the Alumni Association of the New York State College of Agriculture and Life Sciences and currently serving as a member of the College’s advisory council.

Daniel M. Dalrymple ’28, recently retired Assistant Commissioner of the New York State Department of Agriculture and Markets, has recently been named Agricultural Adviser to the Administrator of the Environmental Protection Agency in Washington, D.C.

William C. Jolly ’64 has recently been named Resource Conservation Specialist for the President’s Advisory Panel on Timber and the Environment in the Executive Office of the President, Washington, D.C.
Cooperative Extension is a public service agency "serving the people" across the Empire State through an informal educational program dedicated to extending knowledge of the New York State College of Agriculture and Life Sciences and the New York State College of Human Ecology.

Cooperative Extension works with people where they are — in rural settings and in urban centers. Its programs are carried to the people by Extension agents and volunteer leaders in cooperation with County Extension Associations in 56 counties and community offices in New York City.

Whether the assistance involves providing technical information for farmers, working to improve the nutritional diets of inner city residents, or counseling youngsters on drug matters, the primary focus is people.

This is what Cooperative Extension is all about: people working together to improve themselves and their communities. It is individuals and families, young and old alike, who join friends and neighbors in volunteer programs. It is federal, state, and local governments in a partnership to provide help that brings about improvements. In short, Cooperative Extension is people helping people.
Covering the Agricultural Scene
ON THE COVER—Covered bridges are rapidly becoming a vanishing form of the early settler's rural architecture. When these picturesque structures flourished there were some 250 scattered throughout New York State. Today less than 10 percent remain. Many of these are threatened with destruction. One of the few bridges that has received a new lease on life is located in Newfield, a small community not far from the Cornell campus. Interested citizens recently convinced Tompkins County officials that restoration of the rustic 115-foot span over the west branch of Cayuga Inlet is a good investment in the future. Work is now being completed on the 1853 structure. Our photograph shows the bridge before the face-lifting got underway. Despite the new look that will soon emerge and the use of modern technology and materials to extend the bridge’s life, one feature of its make-up will be the same. As a symbol of the past, the Newfield bridge will help us reach across bygone days to times when lifestyles were more attuned to the natural sights and sounds of the countryside.

PICTURE CREDITS
Cover—Cornell Countryman, page 3—Kristi Rohlf; page 4, 5, 6, 7, 11, 12, 13—Department of Communication Arts; page 6 and 12 (drawings)—Jill Williams; page 7 and back cover—Douglass M. Payne, Department of Natural Resources; page 8 and 9—Todd Duncan; page 10 and 11—David W. Dik; page 14—H. Scott Finer.
The Traditional Aggie
by STEPHEN L. SCHAEFER '73

Whatever happened to the “traditional aggie”: the students who have come to Cornell from the farm and intend to go back home after graduation? We always hear about the “new ag students,” but I wonder if we ever stop to think about the “traditional ag students”? Just who are these aggies that are devoted to the farm life?

Three such ag students are Walt Cook, Dave Fraleigh, and Mackie Forrence. Walt is a freshman from a dairy farm near Potsdam. He is majoring in general agriculture and has a great interest in animal science. Dave is a sophomore majoring in pomology and his family runs an orchard in the Hudson Valley. Mackie is from a 450-acre orchard near Peru in the Champlain Valley, and like Dave, is interested in pomology.

I spoke to them and asked why they want to go back into farming. “I like the outdoors and farming. It’s just a great way of life,” answered Walt. Mackie agreed. “I’ve grown up on the orchard and it’s been a good experience. I just couldn’t work behind a desk. I like to be outdoors.” Dave added that what he likes is the independence. “On the farm, you’re your own boss. You’ve got a lot of things to do, sure. But you’re right there, making your own decisions.”

I asked about their college experiences at Cornell. What did they think about the College’s programs. “I didn’t come to the ag school to learn about liberal arts,” said Mackie. “I came to learn the theory and science behind pomology — and there’s a lot to it. But I want to get back to the apples and apply that theory. I want to use it back home.” Dave said that he looked at school from the practical viewpoint too. “You know farming is really a business. Sure, you can learn a lot on the farm, but not everything. That’s why I’m at Cornell just learning the business part of farming.” They all agree that Cornell’s agriculture program is probably the best in the State.

Even though they intend to go back into farming, all three note that one of the big problems is keeping young people on the farm. Walt and Dave both know of several friends who have left the family farm after college. While Mackie agrees that the problem does exist, his experience has been quite the opposite. “I know about six guys from my area who have graduated from Cornell and gone back to the orchards. They’re putting their education to use and making a good living. That’s what I want to do.”

I wondered how they felt about their futures as farmers. Did they have any definite plans? “I want to go back to my farm and expand it — especially get more cows,” said Walt. “My grandfather started up the farm and it’s been in the family ever since. Someday I’d like to take it over. It would be a real challenge for me.” Dave and Mackie would also like to run their family’s orchards someday. “It takes so much time and money to start up your own orchard nowadays,” said Mackie. “Why it takes five years just to get established. And competition from large orchards is tough.” Dave agreed. “Competition is really a big point in starting a new orchard. That’s why I’d like to develop my family’s orchard. It’s just a lot easier to expand an established operation.”

I asked what they thought about the future of the farmer in general. What changes did they see? “You know,” said Walt, “I think the farmer has always had a low status in society. He’s never had the social status that he really deserves. But now I think the trend is changing. As farm operations become larger and more efficient, the farmer is becoming more respected.” Mackie nodded in agreement and said, “The real importance of farming is finally being recognized.”

“Technology is the real key,” said Dave. “When new changes are brought to the farm, output and efficiency increase. Things like putting in new rootstocks in an orchard, for example. The growers are just getting more efficient and business conscious. I mean the farmer is becoming more and more like a businessman. That’s the real change in farming.”

Our discussion ended and I left with some definite impressions of Walt, Dave, and Mackie. These are today’s “traditional ag students” with a very real devotion to farming as a way of life. They realize the importance of agriculture in the United States today and they want to stay in farming and meet its challenges. They look forward to becoming the modern farmers of tomorrow.
New York Agriculture . . .

‘ain’t what she used to be’

by SUSAN SOROZAN ’73

As most Cornellians will delightedly tell you, Cornell is "in the country"! Any student nostalgically seeking a taste of old-fashioned farm life can hop in his car and, within fifteen minutes, find himself amidst dairy barns or fruit trees.

Munching an apple or petting a docile cow, the student may be convinced that he’s enjoying some good, old-fashioned rural life. But, if he looked a little closer at what surrounds him, his complacency would be short-lived. New York farming has and will continue to change greatly from what it was in the oft idealized past.

For one thing, the dairy farm the student is visiting might not be in operation if he returns the following week. It’s true that dairying, the states' dominant agricultural enterprise, now produces over 10,388 million pounds of milk as compared to 6,500 million pounds in the mid 1920’s. But this increased output has been achieved at the expense of the smaller farmer. In New York State the number of farms has declined from 84,000 in 1961 to 56,000 in 1972. This has largely been due to the loss of smaller farms. Without enough capital, the small farmer can’t afford the large investments in all the technological innovations which have so greatly raised levels of production. Put at such a competitive disadvantage he may simply close down his operations and get a job in a nearby town. On the other hand, he might sell his operation to a larger neighbor.

If this were the case then the student, returning the next week, might be surprised at the type of man the new owner would be. Instead of the "traditional" ideal of a slow-moving, neighborly gent in overalls, the successful new owner would most likely greet the student in a brisk straightforward, businesslike way. And why not? The New York State farmer today has to be both a knowledgeable businessman and an efficient land "technician" if he is to survive in the competitive atmosphere that pervades all of farming. And, consequently, he doesn’t have the time to live the leisurely country life that the student may have envisioned for him.

True, mechanization has freed the farmer from much of the backbreaking work of the past. Jobs like milking, barn cleaning, cow feeding and wagon unloading are being done more and more by machines on the New York State dairy farm. But machines bring their own problems. The dairy farmer, like any farmer, has to balance wisely his cash and credit in order to buy the needed equipment. He has to know how to run it, when to use it and of course, how to service and repair it. This same situation, requiring him to be both businessman and technician, faces him when he attempts to use other technological innovations. The successful dairy farmer has to know not only what kinds of the many different fertilizers are best for his hay fields or what kinds of feed are best for his cows, but also where he can get them for the least amounts of money.

The dairy farmer, like all other farmers, has to be able to sell his increased produce at a price that will hopefully help to pay for the technological innovations he's used. Thus the farmer has to be capable of making good
"New York has increased output over ½, though farm workers are down more than ¾ and farmland down more than ½ since 1900." This trend can and will continue as long as technology keeps the New York State farmer in competition with other agricultural areas of the country.

and profitable contacts with wholesale buyers as well as sellers! Once again, he has to venture into the competitive business world.

But the business world is not the only world that is competitive. As Professor Daniel Sisler of the Department of Agricultural Economics at Cornell warns, the New York dairy farmer, especially, will have to compete more intensely against farmers from other sections of the country for new and better technology. Right now New York State dairying has an advantage over midwest dairying. New York dairy farmers are much closer to the large northeastern cities and the huge market that they represent. Therefore, they can more easily and cheaply transport their highly perishable product, milk, to these huge market areas. But, as technology quickens transportation and improves transporting facilities, other dairy farmers from further away will be able to compete more effectively with New York farmers. If this happens, and it most surely will, then New York Farmers will have to find other ways to keep their prices low in order to remain competitive. They will need more new technology geared specifically for them as an aid in lowering costs on each unit of output. They'll have to know what to ask for and where to get the new innovations. Once again, they'll have to be both technicians and businessmen; knowing exactly what they will need and bargaining to get the research time and effort needed to create the required technology.

No wonder the New York dairy farmer hasn't time to enjoy leisurely country life! And, the situation is the same for the other types of farmers throughout New York State.

The student in an apple orchard might be disappointed to see a mechanical apple harvester picking the fruit he so relished as a symbol of wholesome, uncomplicated "country living." But the farmer who installed the device is happily contemplating the money saved in hand labor; in fact, the number of farm workers employed throughout New York State is expected to continue declining from 122,000 in 1965 to an estimated 47,000 in 1985. Dairy farmers, fruit growers and grain producers alike have attempted to stay competitive by reducing labor costs through mechanization. The major reason why New York farming will continue to be predominantly a family-farming industry instead of corporation agriculture is the same; family labor is much cheaper than hired labor. The family farm has the competitive advantage.

The "traditional" picture of a static family farming industry is far from correct. Sons go to college and bring back to the farm all the new ideas and technology that have allowed New York State farming to increase its yields over 35% while labor and land use have decreased. As Professor Howard Conklin of the Department of Agricultural Economics is fond of saying, "New York has increased output over ½, though farm workers are down more than ¾ and farmland down more than ½ since 1900." This trend can and will continue as long as technology keeps the New York State farmer in competition with other agricultural areas of the country.

This has been the most talked about role of the agricultural industries and universities. Much has been done to create more and better technology through agribusiness and college research in order to keep the successful family farmer successful.

A common sight in parts of New York, this farm was unable to keep up with the changes in agriculture.
If the student mentioned in the beginning of this article had returned to find the dairy farm closed down he might have been prompted to ask what had been done for the many small farmers who wanted to stay on their land; who wanted to continue to live in the country rather than move to the cities in search of jobs. Years ago, the College of Agriculture and Life Sciences saw that this problem would arise. In the 1930's and 1940's the college pushed hard for better rural roads and efficient local government that would be more responsive to the needs of these operators of now defunct farms. The result is that these small farmers are able to retain their property and easily commute to towns and cities for work.

“But,” the student might ask, “what will become of their children, who no longer have the family farming business to fall back on?” Again, the College of Agriculture and Life Sciences had foreseen the problem and pushed hard for consolidated rural schools which would ease the movement of these children from the farm into the wider economy.

The results of these efforts have been fairly successful. Compared to the deep south's pockets of rural poverty, New York has decreased the amounts of labor and land employed in farming without creating a widespread problem of rural poverty.

The student who is nostalgically looking for good old-fashioned rural living won't really find it in New York State. He'll find fewer farms producing more with less and less labor. He'll find one-time farmers happily working in towns and villages as their farm fields yield to the encroaching forests. He'll find busy present day farmers who, far from being isolated from the rest of the economy, are very much involved with all facets of it. The hustle and bustle of modern life has found its way to the farms of New York State. And often the hum of the birds and crickets, so closely identified with country living, can't be heard over the hum of the machinery.
Open House in the Outdoors

A tour of various projects and demonstrations of conservation practices recently brought students, faculty, and area residents to Cornell University’s Arnot Forest, located about 20 miles southwest of Ithaca. The facility is managed by the Department of Natural Resources in the College of Agriculture and Life Sciences. Host for the occasion was Prof. W. Harry Everhart, appointed the Department’s chairman a short while ago.

Used as a research, teaching, and demonstration area in forestry, wildlife management, soil and water conservation, and biological sciences, the 4,000-acre tract is fairly typical of some six million acres of hill land throughout New York State’s Southern Tier. Farms, dependent principally on a hay cash crop, once flourished in this area. But when the automobile replaced the horse, the hay market was lost. Eventually the Arnot hill farms disappeared, their open fields reverting back to trees and forest wildlife.

Pictured, right, Arnot visitors inspect an authentic totem pole carved by the Tlingit Indians who lived along the coast of southeastern Alaska. Prof. Robert Morrow, left, shows how to prune plantation evergreens. Below, Department of Natural Resources chairman Prof. W. Harry Everhart, left, confers with Arnot’s resident manager, Fred Fontana. Lower left, fishery biologist Michael Duttweiler displays a large mouth bass to an admiring group, right, interested in fish pond management. Those attending the outdoor event, lower right, were greeted by a large banner, below, and treated to a mini-concert by a section of Cornell’s Big Red Band prior to the start of the tour and demonstrations.

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On these two pages are tools that date back to the first half of the nineteenth century. Most are rarely seen today, but were certainly common in the days when Ezra Cornell was founding the University. See how many you can identify. (Answers are on page 15.) These tools are part of a large collection owned by Albert F. Schnitzer, a retired Cornell carpenter who resides in Upper Enfield, near Ithaca.
<table>
<thead>
<tr>
<th>Craft Quiz</th>
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<tr>
<td>1. Hand Router</td>
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<td>(for scraping grooves in wood)</td>
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<td>2. Spoke Shave</td>
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<tr>
<td>(used to shave wagon wheel spokes)</td>
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<td>3. Ship Scraper</td>
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<td>(for peeling paint from ships)</td>
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<td>4. Bullet Mold</td>
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<td>5. Wagon Jack</td>
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<td>6. Early Drilling Machine</td>
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<td>7. Automatic Noodle Maker</td>
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<td>8. Wood Plane</td>
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Wayne County

Meeting the Migrant Challenge

by GEORGE HILLER '72 and STEPHEN PHELAN '73

FALL, 1970 – Cornell's College of Agriculture and Life Sciences decides to mechanize Cohn Farm, a fruit farm in Wayne County which employs seasonal labor in harvesting. A storm of protest arises over the loss of jobs for migrant workers.

APRIL, 1971 – In a Sense-of-the-body Resolution, the Cornell University Senate recommends that “the College of Agriculture develop proposals for programs designed to assist the migrant workers employed at the Cohn Farm who have been affected by the University's decision to mechanize the harvesting process and close the migrant labor camp, especially with reference to the 1971 harvest season.”

MAY, 1971 – In response to the Senate's resolution, the college holds a series of meetings exploring the migrant and manpower situation in New York State. Nine areas for possible program efforts are proposed, ranging from courses for workers to education programs for growers on labor-management relations.

JULY, 1971 – The Wayne County Agricultural Manpower Program (WCAMP) is instituted by the Cornell College of Agriculture and Life Sciences. It is funded for a trial period of one year.

SEPTEMBER, 1971 – The New York State College of Agriculture and Life Sciences at Cornell moves to expand WCAMP, voting funding for two more years.

Moving at a speed almost unheard of for a bureaucracy, the College of Agriculture and Life Sciences has created an extensive program of aid for the migrant farm workers of Wayne County.

WCAMP has a full-time staff of four for the moment. Project specialist Stephen Johnson, who is now the project leader, began work with WCAMP in August. Youth Development specialist Herb Engman was added to the staff in November. In addition, two nutrition aides were recruited from the migrant workers. They divide their time between the WCAMP headquarters and Polk County in Florida, where most of the migrant workers winter.

WCAMP's biggest successes to date, according to Johnson, are not the specific projects started, but a foundation that has been laid for the future. “Our major accomplishment so far,” the project leader said, “is that we have finally gained a measure of credibility with the workers. They are coming to us with their problems.” He added, “It took us a long while just to separate out what the major problems were. We had to decide what the worker's immediate needs were, and what their needs were going to be three to five years from now.”

Several projects are under way right now to take care of the worker's needs. One program, aimed at the black workers in the migrant labor force, is trying to help spot and combat Sickle Cell Anemia. The project, a joint effort of the Wayne County Rural Comprehensive Health Program and The Expanded Nutrition Education Program, is mostly an educational effort. A film on the disease will be first shown to local professionals (e.g., school nurses, social workers), and then to migrant labor groups at churches, schools, etc.

A New York State Migrant Study Center at Geneseo is funding a series of classes at the Wayne County Board of Cooperative Educational Services (BOCES) building in Wayne County. The classes, which are being pushed extensively (and so far unsuccessfully) by WCAMP, are all three weeks long, and deal with truck driving, block masonry, and basic secretarial skills. “Our big problem,” says WCAMP leader Johnson, “is that by the time the workers get done in the fields, they don't have time to go to classes.”

Training day care aides is yet another important aspect of WCAMP.
More on the practical side is a project under the supervision of the Self-Help Housing Agency, in cooperation with WCAMP. Using loans from the Farmer's Home Loan Administration, and from other sources, the Agency is teaching workers to build their own homes. Taking the workers in groups of eight families each, experts like Ed Foss, from Cornell's Agricultural Engineering Department, teach them how to build eight complete homes—the families first construct eight foundations, then eight frames, and so on.

Further work is being done in Wayne County through Cornell entomologist Jim Dewey, who, in conjunction with the Department of Communication Arts, is running an educational program on pesticides.

Also, a mobile unit for training migrant mothers as day camp aides was recently designed by the Cornell School of Human Ecology. The unit, financed by the Center for Migrant Studies at Geneseo and Cornell, will visit migrant camps in Wayne County and upstate New York.

Management of the "direction of the program" at WCAMP was shifted this fall to a committee of nine. The committee, consisting of three representatives of the Ag School, three Wayne County residents, and three members of the Wayne County Extension Board of Directors, sees more faculty participation from Cornell in the future, according to New York State Cooperative Extension spokesman David Dik. "I don't think that the college's resources have been fully used yet, and this is what I hope to achieve," he stated.

"As far as I am concerned, the college is committed to anything the 'committee of nine' sees as feasible and necessary," Dik stated. "We don't want to move slowly, but we want to move deliberately."

That seems to be the way it will be. Although WCAMP has made great strides in the fifteen months since its founding, it has still barely laid a foundation for the work yet to be done. However, under the supervision of Cornell and State Extension officials, the program does seem to be on the way to making significant changes to help New York's migrant workers.

**Morse Hall: Let It "Bee"**

A new entomology facility in the form of a small white, wood, frame structure appeared on the Ag quad early last summer.

The structure, informally dubbed "Morse Hall" by agriculture students of Prof. Roger Morse, is being used to repeat some of the classical experiments in bee communication. Students in Biology 423, an animal communication course, will also use the structure's facilities.

A golden sugar solution perched on a platform attracts the bees from the six by six foot structure and a glass walled hive on the inside exposes the bee's activity.

Professor Morse noted that curious spectators need not be alarmed at the buzzing activity. Most often the bees are too involved in Professor Morse's experiments to bother chasing onlookers across the upper campus.

Serious bee enthusiasts will want to note that class experiments have been conducted on sunny Saturdays and Sundays. The building has been dismantled due to inclement weather. "Morse Hall" will reappear again on the first day of the 1973 summer session.
What Ever Happened
by LINDA CAMP '73
and BARBARA REHM '73

Time was when a young lady went to college at Cornell, she studied something called Home Economics, that is, cooking, sewing, and raising kids; the really practical things in life.

Sophisticated city girls were taught the basic household tasks that family servants had always done. At the end of four years, they not only knew what clothes a proper lady should wear, but how to care for them as well. Country girls, on the other hand, who knew more than enough about skirt hemming, got pointers on choosing clothes and making themselves look attractive. Cornell's College of Home Economics had something to offer everyone.

But it just isn't the same anymore. Nowadays young ladies and men would rather learn Human Ecology. They say that Home Economics just isn't enough, that Human Ecology gives them a lot more to go on, like Consumer Economics and Public Policy, Human Nutrition and Food, Design and Environmental Analysis, Human Development and Family Studies, and Community Service Education. As if anyone can really pronounce all of those things.

Cooking and sewing still exist, but "they ain't what they used to be." They have gadgets galore, from fancy ovens that cook food in a flash, to do-dads that can tell when a pair of pants will wear out, even before they've been worn. As for raising kids, it's not a matter of diaper changing or formula preparation. It's learning when the kids are going to start talking, and how and why, or what a stuffed monkey will do for a baby monkey that a live mother won't.

Cooking is like chemistry; they weigh and measure and analyze until what they've got is scientifically perfect. It's sure not the "something in the oven" grandma used to brag about.

When you think about it, maybe things aren't as outlandish as they seem. It's true students don't spend all of their time studying families, but they do spend more time out in the community working. They like to work on real problems, like building playgrounds when there's no money to buy equipment or planning school lunches for children from nearby communities. Things like that are certainly worthwhile.

Cornell has really changed over the years; adding new buildings and faculty and increasing the number of students. It's just not the same place it was a hundred years ago, or even ten years ago, so there's no use in expecting students to be the same. Mass Media, no doubt
has had something to do with the change in kids. They watch television and read many magazines and newspapers, so they're tuned in better to the world around them. Students in the College of Human Ecology get more and more alike every year because of the increased contact, and also increased experiences. It wasn't like that a few years ago. City girls and country girls were miles apart when they came to college.

Another thing that's different is the makeup of the student body. It used to be that girls from places other than New York State were just as scarce as those from foreign countries. Today New Yorkers and Clevelanders and Seattlers are all pretty typical. No one is surprised to meet someone who hasn't heard of the little towns in upstate New York.

When you get right down to it, Home Economics students and Human Ecology students are the same at heart. They like doing things for people, whether it is their own family or someone else's. You can find them in the same places today as they were twenty years ago. Human Ecology makes sense if you stop to think what it really means. But if you should see a female Human Ecology student in the kitchen sometime, don't be surprised if the egg she is cooking turns out to be part of a great research project and not somebody's breakfast.

A Great Lady

From one side, she's like the graceful, charming lady of the early 1900's.

But from another, she's bold and determined, very 1970's.

Who is she?

With all due respect to her namesake, she is Ms. Martha Van Rensselaer.

"Martha Van" is certainly a beautiful blend of traditional and modern architecture. But "Martha Van" is more than a building. And it's what's inside that building, the College of Human Ecology, that offers the most interesting blend of old and new.

When Martha herself attended Cornell, she was looking for an educational center for farmers' wives. If the men from the rural area were going to take an educated approach to their work, she thought it was important for the women to do the same.

But the College of Home Economics was never established only for the farmers' wives. In fact, as New York State populated, more and more of the girls attending the College were drawn from urban areas, particularly New York City.

Following World War II, tradition in home economics began crumbling. Girls were still basically preparing to become good housewives. But there was more of an academic approach to home economics education, and more women were working toward a dual role of wife and career woman.

Finally, in the early '60's, "Martha Van" began to yield to the times. With the massive addition of blocked brick to her back side, she about doubled in size. This expansion was in more than just the physical structure, it occurred in the numbers of students, in staff and in quantity and quality of courses offered.

The "Hum. Eecie" of today is definitely not what Martha had in mind when she wanted to train farmers' wives. But then, the state is no longer predominantly made up of farms, and the average family is not geared to producing another average family. The woman who comes from the College today is career oriented, prepared to meet the world as is, educated in the theory and practicalities of modern changing urban and rural problems, yet touched by the stability and serenity of a great lady.
Today we see the young casting off the shackles of conformity and returning to the cherished lifestyles of their grandparents. They want independence that comes with living off the land and knowledge that comes with it. This new spirit is one of rediscovering nature’s processes which can’t be found living on asphalt.

Leonard W. Feddema, Director of Admissions at Cornell’s College of Agriculture and Life Sciences points out that “The biggest change is in the students’ attitude regarding the earth and its resources. One example of this is the increased interest in the Natural Resources Department.” “Years ago”, says Dr. Feddema, “there were only a handful of students in the department. Now there are hundreds taking courses in the department that are related to man and nature.” The principles of conservation have always been with us. What has changed is the attitude of the people involved.

“In the 1930’s”, he continues, “there was a migration of the people from the land to the city. The people abandoned their marginal farms for survival in the cities. In the 1950’s grandfather recalled the pleasures, not the hardships, of country living to his grandchildren. He remembered the freedom of open space, fresh air, the pleasures of growing his own food, and the security of friendly neighbors. This is in marked contrast to the congested problems of city life.”

According to Dr. Feddema, “There is a strong desire for educated people to retain contacts with the land. Who hasn’t wanted to plant seeds, and get his hands dirty growing food for his table?” This is part of man, the humanistic side. Dr. Feddema points out that “The Indian has this common value; the value and respect for mother earth. Nature to the Indian was a source of life. Land belonged to all. Nobody had dominance over its uses. Unfortunately progress and modern man changed this concept. With the acquisition of private property man moved further away from earlier concepts. Man could change the values of the land to meet the needs for his financial success. Man designed nature. He imposed his values on the land with little regard for the future of mankind. It is only today that civic groups are saying that the utilization of land affects all of mankind. All men should have a say in what is done with his natural assets. Natural resources are in limited supply, and after they are gone we can’t trade this planet in for a new one.”

Young people that want to go back to the land and find their own values in harmony with nature frequently look to the communes or cooperative farms. These farms unfortunately lack financial resources, but do not lack the pride that comes with working the land. For these people the whole earth is a way of life in balance with their ideas and concepts. The idea of organic farming centers around the principle of a natural life. Dr. Feddema adds that “Organic farming received a burst of interest probably as a spillover from Rachel Carson’s Silent Spring. People are now aware of other pollution problems besides DDT. Today’s organic farmer wants to grow a crop that is reasonably free of chemical residues.” The term organic means the crop is being grown without contact with fertilizers, or pesticides, i.e., the natural state of the land before man’s manipulation.

One of the major problems facing the young people who want to go back to the land and farm is the economic cost involved. Dr. Feddema says that “It is unfortunate that many young people that want to go into farming today are dreamers. They don’t seem to have any idea of the cost of running a financially successful farm. You ask them how many acres are they going to grow? What are they going to grow? How many cows are they going to milk? They just don’t know the answers. Farming today takes capital, knowledge and dedication. Chief of these being knowledge, but capital determines success.”

Man is the steward of nature. With more and more people wanting to get back to the basics and farm the land, we must remember that we must exist with nature; not have dominion over it. Ian McHarg in Design With Nature calls for the highest and best use of the land. Today’s young people are aware of the value of nature’s processes, and what the land capabilities are. This is a big step in the right direction.
Palm Receives Award

Charles E. Palm, former dean of the College, received the Distinguished Citizen Award from the New York State Grange honoring his outstanding contributions to agriculture and higher education.

Robert S. Drake, master of the state-wide farm organization, presented the award thanking Palm for his many contributions as an author, teacher, researcher, rural leader, and bringing about growth and increased services in the College.

Palm attended Cornell in 1931 as a graduate student in entomology and plant pathology and received his Ph.D. here in 1935. In 1936 he was named professor and head of the Department of Entomology. He became director of research for two years just prior to tenure as dean. Palm left his position as dean this June after serving for 13 years.

His numerous affiliations included member of the National Academy of Science-National Research Council, chairman of the Agricultural Board and its executive committee, and chairman of the Council of Chief Administrative Officers of the College.

Ornithology

Cornell's Laboratory of Ornithology received a $5,000 gift from the Anne S. Richardson trust for improvement of the Sapsucker Wood Pond and sanctuary area. It will be used to relocate the Dike Trail around the pond and to plant several thousand small trees in the area. Miss Richardson had a lifelong interest in conservation and established a fund for charitable purposes in her will.

Quiz Answers
1. - g; 2. - d; 3. - f; 4. - b;
5. - a; 6. - h; 7. - c; 8. - e.

Prof. Layer Retires

Prof. John W. Layer, agricultural engineer and specialist in farm buildings, retired after serving 21 years in the Department of Agricultural Engineering.

After receiving both his B.S. and M.S. degrees from Cornell, he joined the Department of Agricultural Engineering in 1951. He was appointed assistant professor in 1957 and associate professor in 1963.

Layer has closely worked with contractors, builders, and extension agents in New York on refrigerated fruit storages and is author of a comprehensive study bulletin "Refrigerated Farm Storages." He also served as a member of the inter-departmental task force on ornamental horticulture research, Lambda Chapter of Epsilon Sigma Phi, American Society of Agricultural Engineers, and the executive committee of the Northeast Region.

He was chairman of the Local Arrangement Committee in 1965 and regional group's Structures Division in 1971. In the same year Layer was honored by being made a lifetime member of the New York State Flower Industries, Inc.

Appointed Editor

Elsie McMillan Peterson, '55, an active member of the Countryman staff while at Cornell, has been appointed editor of Harvard Today, a university-wide quarterly publication read by 200,000 alumni. She has worked in the promotion department of the University Press since she joined the staff at Harvard in 1967. In addition to her new duties as a managing editor, she will also work as general editor and writer in the Office of Development at the university.

Apples Year Round

Those days when apples were only a fall treat are apparently gone for good. Professor Robert M. Smock, a specialist in controlled atmosphere storage of fruits at the College, reported that some 27 million bushels of apples went in controlled atmosphere storage just this year. The apples are sealed in air-tight chambers in which the atmosphere is controlled so that the fruit remain as fresh and crisp as when picked.

Of apples stored, the most popular variety in New York is Delicious Apples, followed closely by McIntosh, Golden Delicious, and Jonathans. However, the method does not work for all varieties.

Ag Fund

Pledges to the Fund as of November 1, 1972, now total more than $729,000.00, as follows:

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<th>Type of Gift</th>
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<td>Major Gifts “Friends Program”</td>
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$729,464.01
Yesteryear: Going for the Christmas Tree

Back in the days when lifestyles were tuned more to rural doings than to city goings-on, bringing home the Christmas tree was largely a matter of prospecting for a suitable evergreen in the back forty. Recalling his excursions among the cedars, spruces, and hemlocks, agricultural writer Haydn Pearson tells us, "it took a little searching to find just the right tree." What he doesn't mention is that the prized tree was often far from a thing of beauty. Chances are its trunk was crooked and its top askew — deformed and misshapened by unchecked pests and the stresses from fighting for a place in the sun among woodland competitors. Rare was a tree from such an environment that did not expose its defects through pale, skimpy needles barely holding to spare, poorly spaced branches. But once this natural product of the land was set up in the parlor the miracle of the yuletide unfolded. Lovingly decorated with a few precious mail order trinkets, endless strings of popcorn, clusters of ribbon candy, sprigs of dried berries, molasses and ginger cookies, and perhaps even a knick-knack or two whittled for the occasion, the once forlorn-looking tree was transformed into a focal point of warmth and joy, the center of great expectations for the entire family.

And Today's...

Christmas Tree Farming

The excitement of former times may still be experienced through the traditions of the Christmas season. But now it is possible to start the festivities with an evergreen that is both a beautiful decoration and a quality product in its natural state. The rise and development of the Christmas tree farm represents yet another important segment of New York's dynamic agriculture. Cooperative Extension foresters in the College of Agriculture and Life Sciences estimate that some 100,000 Empire State acres are devoted to Christmas trees, the bulk of them Scotch pine and white spruce. It is a crop grown on about 2,000 farms no longer suited to full-time commercial agriculture, an annual crop valued at more than 15 million dollars in retail sales. While the modern Christmas tree farmer has taken many of the old-fashioned defects out of the back forty evergreen, he has retained many of the essential elements associated with going afield for yuletide greens. A number of plantation owners offer a system of "choose-and-cut" for those who like to select and harvest their own tree. In these plantations this activity is a festive time when neighbors and friends renew acquaintances and keep alive the eternal quest "to find just the right tree."
Far Beyond Cayuga’s Waters
ON THE COVER — It is only natural, because of their proximity to one another, to associate Cornell University with Cayuga Lake. It is a relationship often expressed in prose and poetry and recalled in song. Less frequently cited, however, is Cornell's presence in areas beyond Cayuga's waters. In this regard, an obvious example of the University's outreach activities is the fine work of the New York State Agricultural Experiment Station at Geneva. But certainly not as well known are the somewhat similar examples provided by the College of Agriculture and Life Sciences through its system of research and demonstration facilities scattered across New York. The purpose of these outposts is to support the state's specialized agricultural industries. Keeping them economically viable and productive requires modern regional and local facilities for research and educational services. This issue of the Countryman takes a look at some of these far-flung installations. What hopefully emerges shows that the Land-Grant University's specific commitment to a strong, healthy agriculture and the well-being of people in general is not restricted entirely to the confines of the Ithaca campus. An examination of these field facilities reveals that much of Cornell's influence may be found beyond Cayuga's waters.
Beyond Cayuga’s Waters . . .

Meeting the Needs of Agriculture

New York’s specialized agricultural industries are located throughout the state. Keeping them modern and productive requires nearby facilities for research and educational services.

It is only about a half-hour drive from Ithaca to Harford, along Route 13 to Dryden and then south about four miles on Route 38. The countryside is dotted with farms and rolling green hills, along with an occasional billboard. Sometimes an old barn comes into view as you round a turn, with its weatherbeaten walls and fading red paint. But it is not very different from any other rural road in Central New York.

Suddenly a line of brand new, futuristic looking silos appear on the left and on closer inspection there’s a whole complex of farm buildings which seems very out of place surrounded by all the traditional farms. A sign at the junction of its entrance road identifies the complex as the Animal Science Teaching and Research Center of Cornell University. The silos and the impressive field laboratory will house about 450 dairy animals. This is the first of a series of structures which will accommodate sheep, swine, and beef as well. The 2600 acres of land divided between Cortland and Tompkins counties are the newest major acquisition of Cornell outside the immediate campus area. The land was purchased by the State of New York to facilitate research on all classes of livestock and especially dairy animals. The Animal Science Department will provide leadership for an interdepartmental research and educational program of the New York State College of Agriculture and Life Sciences.

East of Ithaca, on the slopes of Mount Pleasant, leading up to the transmitter and tower of radio station WHCU, Cornell University owns about a thousand acres of land known collectively as the Mount Pleasant tract. This land is shared by four departments in the College of Agriculture and Life Sciences. The Agronomy Department uses land for extensive studies on rotations, variety trials, and other factors affecting crop yields. The Department of Animal Science uses the acreage for pasturing a dairy heifer herd and a beef cattle experiment herd. Research on new potato varieties is being done jointly by the Departments of Plant Breeding and Plant Pathology, with the Plant Breeding Department doing research by itself on cereal and forage crops.

These two land holdings are typical of the two major types of units Cornell operates away from the campus. The Animal Science Center is an example of the large research units the College of Agriculture and Life Sciences operates in various counties of the State outside of Tompkins, while the Mount Pleasant tract is representative of the numerous farms in the Ithaca-Tompkins County area.

Until 1903 Cornell University owned no lands for agricultural purposes outside the 359 acres of the campus. In that year, two farms were acquired, starting a growth trend on the part of the University and the State that as of 1970 totaled 14,223 acres, of which 71 percent is owned outright by the University. Twenty-three percent is owned by the State and administered by the University’s various departments, with the remaining acreage being leased, owned by other agencies, or being grower farmland.

By far the greatest number of units is nearby in Tompkins County. In 1970 there were forty University-owned tracts or farms in the county. Tompkins County also contained two State-owned farms, nine farms leased or authorized by a memorandum of agreement, and one tract (The New York State Game Farm) of State-owned land under the control of an outside agency.

The new Animal Science Teaching and Research Center at Harford N. Y. serves the dairy and livestock industry of the entire state.
“Until 1903 Cornell University owned no lands outside the 359 acres of the campus. In that year, two farms were acquired, starting a growth trend on the part of the University and the state that as of 1970 totaled 14,223 acres.”

The Mount Pleasant tract is a typical one in the county, although it is the largest in total acreage. However, the breadth and variety of agricultural research done on these farms is truly amazing.

One of the oldest tracts is Caldwell Field, currently the base of operations for the staff of the Agronomy Department and a seed-increase testing area of the Plant Breeding Department. Caldwell Field has been used for experimental work continuously for the last 69 years, including rotation studies, forage breeding, and student crop gardens.

Blair farm is another good example of one tract shared by different researchers. The Department of Natural Resources has a fishery laboratory on fifteen acres along Cascadilla Creek, the Animal Science Department pastures dairy heifers and has a barn containing dairy calves, heifers and swine used in nutrition experiments. In addition, the Pomology Department's orchards are located partly on the Blair farm.

The Department of Entomology uses 184 acres in Tompkins County including the McLean Bog, White Church Marsh and the Varne Water Supply Reservation, all of which are used as sites for student collection requirements. The Vegetable Research Farm at Freeville is the site for investigations on the control of pests attacking vegetables and on quality improvement of fresh-market vegetables, while the recently constructed Schwardt Laboratory on Turkey Hill Road is the site for research on mites, lice, and fleas of importance in poultry and livestock production. The rest of the forty acres on the Turkey Hill tract is used by the Department of Agronomy in forest soil investigations.

The Simons farm at Freeville, besides hosting the Department of Entomology, has the Vegetable Crops Department doing work on weed control, etc., and also the work of the Plant Breeding and Plant Pathology Departments. The Fyler farm at Freeville is the site of research for three of these four departments, the missing one being Plant Breeding.

The McGowan farm is the site of research by the largest number of departments. The Animal Science Department uses 12 acres for beef pasture; the 25 acres of woodlands are used by Natural Resources for teaching and research in farm forestry; the Floriculture Department does turfgrass and nursery research; work on forage crops and vegetables is done by Plant Breeding; the Poultry Research Farm #1 on the west side of the Dryden-Ithaca Town Line is part of the McGowan tract, and part of the Pomology Orchards are on the farm.

In the area of Tompkins County Airport, off Ellis and Hanshaw Roads, the Department of Natural Resources is doing studies on wet woodlands, controlled burning, and succession. The same area is used by the Agronomy Department for aquatic studies of the ecology, physiology, and management problems of the aquatic environment. The area is also used by the Department of Entomology.

These are just a sample of the research done by the departments of the University in the Ithaca area. Much of the land in the eastern part of Tompkins County is used by the College of Agriculture and Life Sciences in research, pasture, and dairy purposes.

Besides the Animal Science Teaching and Research Center in Harford and the New York State Agricultural Experiment Station at Geneva, Cornell owns or operates 17 specialized research and demonstration facilities. These facilities do a wide variety of research, from the maple syrup studies at Lake Placid to the Duck Research Laboratory at Eastport on Long Island.

One of the more well-known properties is the Cohn
At the Miner Institute, Chazy, N. Y. the College is embarked on an expanded dairy improvement program to provide modern facilities to test the newest technological developments.

Fruit Farm at Sodus in Wayne County. The farm received considerable attention when its use of migrant farm laborers was publicized. Since that time the University has taken steps to help the migrants while still performing valuable research on fruit trees by the Department of Pomology. Land on the 250-acre farm is also used by staff members of the Plant Pathology Department and the Geneva Experiment Station.

Since 1949 the University has owned valuable “on location” research facility, the Aurora Research Farm. This 450-acre facility is used by many departments in the College of Agriculture and Life Sciences doing research on production, management, surface runoff, and drainage studies, and corn breeding and weed control.

At Fredonia in Chautauqua County, research on grapes is being done by the Geneva departments of Pomology and Plant Pathology, while on the other end of the State at Riverhead and Farmingdale on Long Island problems of the vegetable and ornamentals industries are being investigated.

Cornell certainly has progressed far beyond Cayuga’s waters. In the 69 years since the first off-campus land purchase, the College of Agriculture and Life Sciences has extended its work over New York State, and has established itself as being among the greatest agricultural institutions in the world.

Examples of N.Y.S. College of Agriculture and Life Sciences Facilities Beyond the Cornell Campus

Animal Science Teaching and Research Center – Harford, N. Y.
Serves dairy and livestock industry of the entire State. Plans call for dairy, sheep, swine, and beef facilities to be included in this complex, allowing comprehensive research and demonstration of production and management technology.

Aurora Research Farm – Aurora, N. Y.
Research on pollution is now one of the largest single efforts; work deals with surface and subsurface water quality and quality as influenced by past and present management.

Atwood Forest – Van Etten, N. Y.
Used as a research, teaching, and demonstration area in forestry, wildlife management, soil and water conservation, and biological sciences.

Cohn Fruit Farm – Sodus, N. Y.
Operates as a commercial farm under contract by a manager; also used for experimental purposes.

Miner Institute – Chazy, N. Y.
Represents a new, cooperative project for North Country dairy production. An expanded dairy improvement program provides modern facilities and field areas to test the latest technological developments.

Cornell University Biological Field Station – Bridgeport, N. Y.
Situated at Shackleton Point on Oneida Lake, this facility is headquarters for a large-scale, warm-water fishery research project.

Cornell Ornamental Research Laboratory – Farmingdale, N. Y.
Conducts research that deals with the culture and production of ornamental plants. Work includes investigations into pest control, growth regulators, and other problems relating to the needs of environmental beautification.

Vineyard Laboratory – Fredonia, N. Y.
Operated by the N. Y. S. Agricultural Experimental Station, this facility concentrates its research on grape production problems affecting the industry.

Long Island Vegetable Research Farm – Riverhead, N. Y.
Research deals primarily with potatoes, including work on diseases and insects, fertilizer rotations, varieties, and weed control.

Hudson Valley Research Farm – Highland, N. Y.
Research here is devoted to the region’s fresh fruit and vegetable production.
Beyond Cayuga’s Waters . . .

Searching the Sea for New Resources

by LINDA J. STILLMAN ’74

Cornell University certainly extends beyond Cayuga’s Waters in the field of marine biology. Four hundred miles away, Cornell is in the midst of constructing a marine laboratory at the Isles of Shoals.

The Isles of Shoals is a group of eight small, barren islands ten miles southeast of Portsmouth, New Hampshire. Its three main islands include Appledore (400 acres), Star (150), and White (55 acres). During the summer months steamers take tourists on daily excursions to the islands.

The islands have a rather intriguing historical background. At one time the area was said to have been originally owned by Captain John Smith of Pocahontas fame. Some even say that buried treasures still exist there. In the late 1800’s the well established Appledore Hotel Complex was erected and was one of the first resort areas on the eastern coast. The hotel was abandoned in 1914 when a fire destroyed most of the resort. Nationally famous artists from all fields went to the Shoals as a retreat. Artist Olaf Brauner, who did many of the portraits of Cornell’s founders and leaders now hanging throughout Cornell buildings, did a good part of his work at Appledore Island. Our own Professor John M. Kingsbury, author of The Rocky Shore, made many of his observations at Appledore Island.

Before reaching their present state, the islands had several other uses. The military had a Coast Guard House stationed there during the first half of this century, but it was abandoned at the end of World War II. Shortly after the turn of the eighteenth century, the Shoals hosted a school, The Appledore Preparatory School for Boys.

But perhaps the most relevant function the area served pertaining to its present use was that of a marine laboratory. In the nineteen twenties Professor and Mrs. Jackson from the University of New Hampshire (UNH) desperately wanted to form a marine zoological laboratory designed for undergraduate students. It would be primarily for studying marine animals and ecology.

Upon suggestion by one of their students, they sought out the Isles of Shoals as a possible location. By 1928 the couple had managed to repair what was left of the Hotel’s ruins into the UNH Marine Laboratory Station. Select students from UNH participated in a very comprehensive program including private conferences for weekly reporting on their accomplishments from the week’s work. With the advent of World War II, UNH was forced to close its station and never reopened it.

Under the leadership of John M. Kingsbury, the present-day marine laboratory at the Isles of Shoals came into existence. Seven summers ago the program was developed to provide the undergraduate student with enough exposure to marine science to help him make a career decision, whether it be a special field in graduate school or a specialized marine operation. Until very recently, the program had been using the facilities on Star Island which were generously made accessible by the Star Island Corporation of Boston. However, these facilities could only be used for the two-week interval between the end of the spring session and the beginning of the conference period at Star Island. The program was only able to accept 30 students from the usual 100 applications they received.

Five years ago an intense study was made by a Cor-
nern committee to find out the desirability and feasibility of establishing a Cornell field station or marine laboratory. Other programs already in existence were carefully studied, and a survey covering the eastern seaboard from New Jersey to Maine was made to find a possible location. At the conclusion of the study, the committee members unanimously approved the program, and carried it through the necessary route of proceedings climaxing with the Cornell Board of Trustees.

The next major step was the always necessary fund raising drive. The goal was set at $350,000, but Cornell had agreed to start construction when $250,000 had been obtained. Unfortunately, there was no financial help available from the federal government. The program had to rely mainly on private donations. As the money was slowly acquired, by March 1971 the program was only a few thousand dollars shy of the first goal. In April the Cornell Board of Trustees finally gave its approval to start construction on the island. After the 1971 summer session in June, construction and renovation began on Appledore Island. The contractor hired nearly all students to do the labor. Some students even worked for just room and board under the supervision of Professor Kingsbury.

The first project to be performed was building basic life-supporting facilities. Most of the summer only one professional worker, a carpenter, participated in the work. Close to $125,000 was spent that summer.

This past summer much progress was made on the station, but the teaching program still had to take place on Star Island for the first three weeks while the last week was spent in a UNH laboratory in Durham. About the same amount of money was spent this summer as last as the group continued development of the island. By next summer Professor Kingsbury plans to house the students in the Cornell Laboratory on Appledore Island. However, the session will be held in August to allow extra time for more work to be accomplished on the buildings.

To finish the entire project, it is estimated to take at least five years and will cost about another $150,000.

What are the program's main objectives? What does it offer the student? These are the basic objectives that the marine lab follows closely: the quality course instruction offered in marine science is geared to the undergraduate to shape careers; the Isles of Shoals, which is rich in biological resources, is particularly protected against pollution which permanently destroys the habitat; the site has been made available to the public and the organization encourages visitors to become interested in the program.

The program is primarily operated by Cornell University, but the University of New Hampshire and the State University of New York contribute their efforts too. Presently 40 students are accepted from an ever-increasing number of applications. Those selected then become married to the program for the month the program is in progress. The faculty includes many experts who are tops in their chosen fields and the teaching system tackles the subject from a very practical point of view. It stresses an integrated approach between the students and faculty. The students experience this interaction on an individualized basis, 24 hours a day. Few educational programs can allow such a personal relationship between faculty and students for that extended amount of time.

Besides professors and experts, fishermen, and others who work in the marine profession lecture to the students. A large variety of topics is covered over the course of the month, supplemented by frequent field trips. To mention just a few of the more interesting subjects, they lecture on intertidal environment, crustaceans, currents, temperature and salinity gradients, economics of marine algae, and marine microorganisms.

The program also provides additional activities carried on in small groups. Diving, marine ornithological field trips, and boat handling rank high on its list. This year both Cornell and UNH awarded five credits to their students for Field Marine Biology or the Introduction to Marine Science respectively.

By the summer of 1974, the program anticipates handling 180 students. There will be three one-month sessions with 60 different students participating each time. A research program will also be unfolding to supplement the teaching program. Yes, Cornell reaches far beyond Cayuga into new and challenging waters.
Through TV

Telling It Like It Is

It's a risk walking in Martha Van Rensselaer Hall these days. Anyone at any time in any place might suddenly find himself in front of a television camera revealing his innermost thoughts and opinions. Even the lounges and classrooms aren't safe anymore. They've been invaded by television sets, and two or three times a day the screens come alive with professors, janitors, students, and other people. What does it all mean? Many have been asking just this question, and the response they have been getting is "This is Open Channel."

For some time now, a number of people have been concerned with the quality of communication within the College of Human Ecology. Despite the fact that much of the College's activity is housed in a single building, the contact between the various groups within Martha Van Rensselaer Hall has not been totally satisfactory. As this school year got under way, Dean David C. Knapp stated that internal communication was one of the primary problems he hoped to focus on during the year.

Open Channel, one response to this plea for better communication, was conceptualized by Thomas Hanna, Editor of the Human Ecology Forum Magazine. In simple terms, it is public access television; a system that gives everyone within the College, and even those outside, the opportunity to use the closed-circuit television system in Martha Van Rensselaer for whatever purpose they see fit. It is intended to provide the College with a completely different medium for expression and a wide range of communication experiences.

Since the middle of October, Open Channel has been broadcasting on a regular weekly basis. The kinds of things discussed via Open Channel have varied from an examination of exams to excerpts from "The Last Thing On My Mind," a videotape on problems of the aging, produced by Joseph Koncelik, Professor of Design and Environmental Analysis. One program saw a professor smacked in the face with a chocolate cream pie, while the last program of the semester was a critical look at the issue of internal communication that explored the validity of Open Channel itself, as a solution to communication within the College.

As with any new venture, Open Channel has had its difficulties. The primary concern so far has been getting more people involved. Suggestion boxes have helped people in the College to make suggestions for programming, but to work, Open Channel must go beyond this, to actual participation in the creation of television messages. At present there is a group of about ten people who have participated in Open Channel on a regular basis, while another twenty persons or so, including faculty, staff and students, have expressed interest or offered ideas.

There is a whole range of experiences that Open Channel has yet to explore. Currently Open Channel people are experimenting with live broadcasts in the building to make people aware of what is occurring in different locations. Most of the shooting takes place outside the studio of the Educational Television Center in Martha Van Rensselaer, using a remote unit to tape in the halls, classrooms, and offices. In the future Open Channel hopes to explore even more potential ways of using television.

What lies in the future for Open Channel? Already ideas are taking shape for the spring semester. The main goal will still be to make it everyone's medium by increasing the kind and number of people involved. Can Open Channel solve all the problems of internal communication? Some people within the College feel that television is a very impersonal medium, that it cannot really bring people together. But there are others, who have spent the last semester working with Open Channel, who feel very strongly that it has great potential, that it can change things if given the chance. Whatever the outcome, Open Channel has been an interesting change for Martha Van Rensselaer Hall. It could very well be that things will never be the same again.
Beyond Cayuga’s Waters . . .

Upgrading Upstate’s Maple Syrup Production

By SUSAN SOROZAN ’73

On these cold winter mornings many people trade in their breakfast bowls of cold cereal for right-from-the-griddle pancakes. They ambitiously stack their plates with these hot cakes and then proceed to smother them in maple syrup, confident that their supply of the tasty dressing won’t run out. But, this was not always the case.

Years ago, maple syrup producers couldn’t always guarantee abundant supplies of superior syrup, especially as the syrup collecting season wore on. For example, sap collection techniques were inefficient. And, later in the season, the warmer weather promoted sap spoilage. Within the last fifteen years much research has been done to find techniques which would solve these and other problems. Nowadays the enthusiastic breakfaster can enjoy his smothered pancakes as often as he likes. And, the New York State College of Agriculture and Life Sciences at Cornell has contributed much towards the new innovations adopted by New York maple syrup producers which make this possible.

In 1957, the College of Agriculture and Life Sciences began what is now a 1,400-tree maple syrup collecting operation at the Arnot Forest, close to Cornell. In what is a relatively small installation, much early research was done concerning many important aspects of syrup production.

Different types of plastic tubing used in running the sap to the collection tanks were examined to determine which was best for the New York State climate. Different methods of protecting the tubing from destruction by rodents were investigated. Better ways to “tap” trees were explored and, for example, it was found that chain saws with special adapters and drills were efficient.

While research in areas such as these still is going on, the maple sap is collected and processed in the sugarhouse at the Arnot. This sugarhouse contains two evaporators which condense the sap into maple syrup. Some 450 gallons of syrup are produced every season and sold to finance additional research. Research is constantly desired by maple syrup producers eager to learn more efficient methods of production.

Perhaps responding to this great demand for information, Mr. and Mrs. Henry Uihlein offered to lease land to the College of Agriculture and Life Sciences. The more rigorous conditions on this land guaranteed that even more research could be done; especially research concerning factors involved in high elevation maple syrup production. And so, in 1965, the College began research operations on the Uihlein’s Heaven Hill Farm in Lake Placid, New York.

A full-time manager, Mr. Lewis Staats, was employed to run the 4,000-tree operation. Mr. Staats is kept quite busy with his many duties and the large number of trees in his care. In the fall he participates in maple

Years ago maple producers could not always guarantee abundant supplies of superior syrup. But within the last 15 years research efforts have helped to increase the availability of quality syrup.
“schools,” for New York State maple syrup producers, where the newest techniques and discoveries and most recent problems which have arisen are all discussed. Then, starting in January, the trees have to be tapped and the tubing has to be laid out. It is a task requiring over 40 man-days or nearly two months of labor! Also, additional time is required to implement research procedures and to maintain accurate records. At the end of the sap collecting season all of the tubing, 15 miles of it, has to be collected and catalogued according to which tree it taps. Then it is washed and dried. Throughout the sap collecting season the sap is processed in a sugarhouse built at Heaven Hill.

Much of the resulting syrup is sold to tourists who come to visit the farm. But, some is also sold to commercial marketers in the surrounding areas for premium prices. These high prices received for the excellent quality syrup have done much to encourage other maple syrup producers in these areas to adopt the more efficient production and marketing techniques employed at Heaven Hill. The adoption of these techniques has raised the quality, quantity, and prices of their maple syrup as well. With increased incomes producers are encouraged to further production and constantly employ more modern methods — to the delight of all maple syrup lovers!

But the story of the College of Agriculture and Life Sciences’ involvement does not end here. For, in 1970, the College further initiated research in syrup production at Miner Institute in Chazy, New York. The additional trees, facilities, labor, and other resources offered by the Institute contributed to a major innovation in sap collection. The combined research at all three stations, under the direction of Prof. Robert Morrow of the Department of Natural Resources, led to the important development of theory and practical applications of natural vacuums. It is a technique which is very useful in increasing the flow of maple sap.

Apparently, sloping land can be utilized in tubing layouts to cause the weight of sap in the tubing to make a natural vacuum. This vacuum draws much more sap than other more conventional methods of sap collection. In fact, sap flow was shown to be capable of an increase of as much as 50 percent, depending upon such factors as the slope of the land and the size of the tubing. The significance of this new method is that natural vacuum-induced increases in sap flow greatly add to the amounts of maple syrup produced with little or no additional cost to the producer.

This major innovation and the many other important results of research done at all three stations have been of considerable help to maple syrup producers. As more and more of them adopt the methods developed by the College of Agriculture and Life Sciences, the increased supplies of syrup will be available to a greater number of people. Thus more consumers will come to know and enjoy yet another of the state’s quality agricultural products.

Above right, The sap passes through evaporators, such as shown here, on its way to becoming the high quality maple syrup available from New York State producers.

Right, A small part of the many miles of tubing stretching from maple trees to sap collecting tanks at Heaven Hill Farm.
Beyond Cayuga’s Waters

Mapping New York’s Land Resources

by NANCY B. COLE ’71 and BETH CARVER ’73

One of the first steps in drawing up a management plan for an area is to find out what’s there. Two projects at Cornell are active in mapping the natural resources of New York State so that this information will be readily available for individuals and agencies to use.

Prof. Howard H. Conklin, in the Department of Agricultural Economics, N. Y. S. College of Agriculture and Life Sciences, gathers information on New York’s farmlands. His main concern is with economic viability, or the ability of a farm to continue to operate profitably. Using air photos and field observations, along with such secondary sources of information as soil maps, topographic maps, census data, and county agent’s reports, Professor Conklin and his associates identify and classify the full-time farms in the state. Only those farms which provide the full-time employment and livelihood for at least one man are considered. Based on the land resources and the condition of buildings and other improvements on each farm, the farms are classed according to the likelihood that they will remain in operation.

The results of the survey are published in the Cornell Economic Land Classification Leaflet series and distributed on request. Each leaflet concerns a single county and includes a map showing which parts of the county have the most viable farming, which are on the way out, and which are already obsolete, with only scattered full or part-time farms. Some counties, such as those in the Adirondacks, have not been mapped, because they have for all practical purposes no farming at all. The leaflets are intended to help people interested in establishing farms or farm-related businesses in New York State as well as those farmers who may be trying to decide whether or not to make further investments in their farm or to convert to some other use.

A more comprehensive resource survey is the Land Use and Natural Resources Inventory (LUNR) conducted by the Center for Aerial Photographic Studies in the College of Engineering. LUNR is a survey of not only agriculture but many other resources in New York State. There are over 50 classifications ranging from forest to downtown areas. Ernest Hardy, formerly a research associate at the Center, says that LUNR is unique, the only workable resource survey system of its kind in the nation. LUNR is not only comprehensive, it is also computerized to make information retrieval quick and easy.

The data included in LUNR is basically three kinds — area, point, and linear data. Area data are mapped on transparent overlays with topographic maps as the base, then transferred to the computer disks on the basis of a very fine grid system. Point data, such as farm head-quarters, schools, churches, small ponds, and other things of interest but not large enough to map as areas, were counted and assigned to their respective cells of the grid and also stored in the computer disks. Linear measurements were recorded for such features as railroad, highways, and shorelines. The computer system is set up in such a way that random retrieval of information is possible for any cell. Each cell is one square kilometer, and further divided into 100 mini-cells, thus it is possible to get quite detailed information for any area of the state.

There are several products of the LUNR Inventory which are of interest to potential users. There are overlay maps for either area or point and linear data, workbooks that record the data for each cell, a computer printout (DATALIST) that lists information about each cell and maps produced by the computer (PLANMAP) indicating location of and a quantitative analysis of various resources for the entire state or parts of it.

The LUNR Inventory was originally done to aid the N. Y. State Office of Planning, which sponsored the project, in making decisions for future land use in the state. Many other agencies also use the information, however, including the Soil Conservation Service which is studying river basins and watersheds in Onondaga County, and the Environmental Protection Agency which is concerned with stream eutrophication. An engineering consulting firm is using LUNR data to determine the environmental impact of power plants and transmission lines.

Requests for information also come from private individuals. Uses for LUNR data have ranged from finding areas that are promising hunting grounds to locating the boundaries of a particular piece of property.

The Inventory is designed to be flexible so that there will be a means of expansion and updating in the future. Since most of the data comes from air photos taken in 1968, it is already slightly out-of-date. Charles Hunt, a researcher at the Center, suggests that photos might be flown every five or ten years for heavily used areas and every twenty years for little-used areas. New variables have also been proposed to allow greater qualitative manipulation.

Whether the information you seek about New York State and its resources is strictly agricultural, or entirely urban in nature, whether you are interested in a variety of resources in one area, or one resource and its distribution over the state, chances are you can find it at Cornell.
The Educational Television Center is a recent addition to the New York State College of Human Ecology at Cornell University. A service arm of the Department of Communication Arts, the ETV Center combines the latest communication techniques with the latest in communication technology.

The business of the ETV Center is to produce effective, high quality television productions on videotape to be used for instruction, public service, and research.

A professor can use the closed-circuit television network for instruction. The ETV Center is also capable of producing public service programming in a variety of formats and distributing them to commercial and noncommercial television stations throughout New York State.

The Center is currently exploring the area of continuing education programs for professionals, an already popular practice in the field of medicine where doctors must keep pace with the latest advancements in their profession.

Television can aid research in the collection of visual data, comparison, collation,
through Television

Good ideas for using television to advance in a specific area often come from the person initiating a project. The ETV Center can help him develop his ideas and put them into action.

Three portable video systems including orders, cameras, and associated gear make production for closed-circuit purposes flexible. Two portable broadcast-quality cameras and a compatible video and audio control will give the ETV Center added flexibility in the future for programs produced for broadcast purposes.

Today's students, raised under the influence of commercial network television productions, expect the same high quality in instructional television programs. The production, writing, and engineering staff of the center combine commercial, educational, and national network experience to produce top-quality programs. Sophisticated broadcast-quality equipment makes professional production possible. A young but experienced staff makes production imaginative and flexible.
Operation Hitchhike is a program you can really get excited about.

It is one of those concepts that comes along once in a long time and after you hear it, you say to yourself, "why didn’t somebody think of this before?"

Hitchhike uses a new idea to combat an old problem — unemployment. More than 40 percent of the poverty in America exists in the rural areas. Yet rural residents, employers, social agencies, and educational institutions in these areas simply do not get their fair share of the manpower programs that are available in the cities. Things like public employment services and occupational training, although they may exist in rural areas, do not adequately serve the needs of rural people in today's rapidly evolving society. Operation Hitchhike is doing something about it.

Under the Hitchhike concept, manpower services are brought to the residents of rural areas by "hitchhiking" these services onto an already existing, effective agency in the project area. The idea is simple, and so far has been very effective.

Organized in 1971 on the federal level, the program has been implemented in the form of eighteen pilot projects in various select spots throughout the country. One of these projects is located in nearby Schoharie County. No two projects are exactly alike. The concept of "hitchhiking" or "piggybacking" allows latitude when planning and implementing the program to serve a specific area. The project can be "custom tailored" to best suit special needs or problems. The North Carolina project utilizes the state community college system. Alaska’s Hitchhike has hitched a lift with the Air National Guard to reach its target area. In Nebraska the Farmers’ Union accommodates the Hitchhike program. On and on the list goes, all the way to Arizona, New Mexico and Utah where Hitchhike and the Navajo Tribal Council have united to bring employment services to the Indians.

One morning Schoharie County Hitchhike Program Leader Wendy Rayner told me all about the program. From the outset of the conversation, her involvement radiated a kind of message about the program you don’t get from words. As Wendy put it, “We’re really concerned with the needs of the people in Schoharie County. Schoharie County has traditionally had a very high rate of unemployment,” Wendy pointed out, “in fact, their average has always been higher than those of both the state and the nation.”

Back in March 1962, the county was classified by the United States Department of Labor as an "area of substantial and persistent" unemployment. At that time the unemployment rate was 12.2 percent. Ten years later, in March of 1972, the unemployment rate was 11.1 percent in Schoharie County as opposed to 5.9 percent for the entire country and 6.3 percent in New York State.

It is depressing to note how many residents in Schoharie County don’t have the opportunity to bring home a paycheck, and that’s why they urgently need a program like Operation Hitchhike, but it is just as depressing to take a look at the paycheck itself of those who are lucky enough to be bringing one home. This comparison of per capita income in Schoharie County with that of upstate New York accentuates the need for job training and development as well as job placement for the hundreds unemployed.

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<tr>
<th>Schoharie County</th>
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<td>1966</td>
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<td>1969</td>
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We can easily see that the situation of unemployment in Schoharie County is further aggravated by a seriously small amount of growth in per capita income there over the past few years. The per capita income of residents of Schoharie County has increased less than half that of other upstate New York residents over the same period.

Wendy doesn’t confine her description of the problem to figures. She goes on to say, “This is a county of meager industrial prowess and their soil, in many places, is not conducive to farming on the scale that we see today.” She emphasizes that, "their highest population was in 1880.” The county is divided almost in half by mountains, “so we have really two sectors,” she adds, “with which to deal.”
“So you see,” says Wendy in summing up the problem, “that these and other factors combine to present a real problem. We have many older people in the countryside who are just existing. Maybe they’re living off the land. They’re perfectly capable, and willing workers but under the circumstances, they have simply become neglected.” She pauses momentarily and proceeds, “The same thing is occurring on the opposite end of the spectrum with youth. They’re not getting the breaks other young Americans get. It’s a problem of limited opportunity and not being adequately prepared for the everyday business of making a living.”

The staff have their share of problems too. “We have to realize that we don’t really know the problems of the people; that is, the underlying problems,” Wendy says. She is quick to point up the fact that, “We must go on assumptions. Maybe the real heart of the problem is cultural or attitudinal. We can make an educated prognosis, but we don’t really know.”

This is where Hitchhiker’s affiliation with New York State Cooperative Extension is a valuable asset. Just as other Hitchhike Projects have “hitched” onto an already established institution in a rural area, Schoharie County’s Hitchhike Project has “hitched” onto the Cooperative Extension program to bring manpower services to the rural residents. Cooperative Extension is almost synonymous with rural New York State. Extension people have played a prominent role in this area in the past and many channels of communication with the residents are open to them that might not be to a platoon of newcomers moving in with a “newfangled” program. This aspect sets Hitchhike off from other programs of its type and this is where Wendy places some heavy emphasis. She says that, “The traditional criticism of new programs is that you come in, provide your service, and you don’t care about the people. That’s where we’re different; we care.”

The program operates with two “teams”; one in the field (Schoharie County), and the other here at Cornell. The county office is in the Extension Building, 41 South Grand Street, Cobleskill. It is staffed by one employment services expert, one extension specialist for manpower, three paraprofessionals and a secretary. This staff works with the people. They divide their time among several activities, to assure maximum contact with both prospective employers and jobseekers as well as local organizations and agencies with which working relationships can be developed. The word “develop” is a key one since, in addition to job referral and placement of individuals in job openings, the Hitchhike program is striving hard toward the long range goal of raising the number of in-county job positions and the quality of those positions. As might be expected, this requires training residents for higher-paying jobs, developing those aspects of the county that invite industry and then drawing industry through good public rela-

“The concept of hitchhiking or piggybacking allows latitude when planning and implementing the program to serve a specific area.”
“Operation Hitchhike must act as a catalyst in matters of long-range development rather than an implementer, but still much can and is being done.”

residents in jobs. By looking at the figures, we can readily see the magnitude of success the project has thus far achieved. In August, their first month of operation, the staff placed 12 rural residents in jobs. By the end of September, the figure for job placements had risen over five-fold to 64, and at the end of October the number of people placed in jobs was nearly triple that of September, standing at 175. The latest figures are for November. As November drew to a close, 216 residents in Schoharie County had found jobs through Operation Hitchhike.

Awed by Hitchhike’s early success, I asked Wendy if this trend would reach a plateau where it would level off and if perhaps, after this initial surge of job placements, there might be a “dry up” of jobs. Her answer was an emphatic “NO.” She conceded that “the winter might be a little tight,” but she also pointed out that things are changing. “We’re just getting settled in now,” she said, “and many local institutions, employers, and community leaders are getting to know us and what we’re trying to do.” People like town supervisors and interested employers are starting to produce feedback for the program. An Advisory Committee has been set up in the county for precisely this kind of feedback. Included on the Advisory Committee are a town supervisor, a couple of employers, and a community development specialist. Most recently they have recommended that, “Hitchhike should get involved with youth and the world of work.” They felt that too many youths were not adequately prepared for the workaday world when they completed their education. This two-way exchange of ideas, from the residents in Schoharie and from the Hitchhike Program itself, promises to be invaluable when finding new direction for the program and redefining its goals. Hitchhike is not a static enterprise; things are happening and changes are constantly being considered so that Hitchhike can, as Wendy says, “develop and stimulate Schoharie County’s manpower resources.”

The future looks good for the county. “Schoharie County.” Wendy comments, “is really beautiful. Much of it is unharmed by technology and the scenery is second to none.” She mentions places in the county like Howe Caverns, Blenheim Covered Bridge, and Old Stone Fort Museum. Many residents of the county are interested in developing more fully the tourism aspect of their economy and Wendy agrees, although she cautions, “this is an aspect of development that must be well-planned. It’s too easy to ruin this natural beauty with jumbled and gaudy signs and billboards which detract from the pleasant atmosphere.” Other factors that figure in on Schoharie County’s promising future include the planned construction of Interstate 88 through the county and the expansion of Cobleskill Agricultural and Technical College. These things figure into the scheme of Operation Hitchhike’s long-range goals of development.

Since Hitchhike is a pilot project, a main concern is to develop a model for the use in other rural areas. This rests high on Wendy Rayner’s list of priorities because a good model program that has proven successful paves the way for its use on a larger scale. Judging from Hitchhike’s progress so far, this is “just what the doctor ordered” for some other areas in Upstate New York that come to mind.

To learn that something is being done to correct the rural manpower problem through an innovative program such as Operation Hitchhike, and to hear Wendy tell it, is a gratifying experience. We’ve all been exposed to hoards of information about things that are being done to help the people in the cities, and that’s good. But what about the person who finds his roots in the countryside; who loves rural living despite its changing complexion? He has problems too. That’s why Operation Hitchhike is a program you can really get excited about. It’s one of those concepts that comes along once in a long time — and it works!

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**Operation Hitchhike executive committee and field staff meeting in Schoharie County to plan programs that seek to increase job opportunities.**
Beyond Cayuga’s Waters . . .

Improving Long Island’s Duck Farming

by SUSAN SOROZAN ’73

Say “Long Island,” and what comes to mind? Probably mass suburbia, bumper-to-bumper expressway driving, or beaches to entice surfing enthusiasts. But if you are agriculturally-oriented your first thought might be of ducks. Further, if you are responsible for the major share of the shopping in your household, ducks may also come to mind. For the Long Island duckling is a fairly well-known item among knowledgeable consumers. Also, it rates high among connoisseurs, especially as duck à l’Orange.

Odds favor Long Island’s Suffolk County as the source of the succulent roast duck that is brought to your dinner table. In fact, Long Island supplies some 45 percent of all the domestic ducks consumed in the United States. Moreover, the odds are even greater that much of know-how that went into the raising of this quality product was based on research conducted by the Department of Poultry Science in the N.Y.S. College of Agriculture and Life Sciences at Cornell.

Back in the 1940’s Long Island duck producers realized their need for help in handling one of nature’s many quirks. Water, a seeming necessity for raising ducks, was also a medium which transported diseases severely afflicting the high density flocks. The producers asked the Department of Avian Diseases in the Cornell Veterinary College to help them find a solution to the problems. A research station was established in Eastport, Long Island. Since its founding this station has been funded by New York State through the budgets of both the Colleges of Agriculture and Life Sciences and the Veterinary College. The State funds have been more than matched by direct contribution from the duck growers. Although work was originally directed at disease control, in the late 40’s and early 50’s research was expanded to include studies on nutrition, management, and genetics through the Department of Poultry Science. Dr. William F. Dean supervises this research at the Duck Research Laboratory at Eastport.

Disease control work at the station was directed to the detection of diseases and the manufacture of vaccines and serums to control outbreaks. Meanwhile researchers from the Department of Poultry Science attacked the problem from the management angle. “Why not eliminate the water and raise ducks on dry land?” they asked. And so they began experiments with raising ducks on dry land. They discovered that this “obvious” solution was not quite so simple. For one thing, in the summer months the duck’s only way to cool himself off is through keeping his “feet” wet. He needed to stand in water! So, results of the research investigation led to the recommendation of flowing, shallow water.

Furthermore, producers’ profits also depend on the condition of the ducks’ feathers and down, which are sold for pillow stuffing. There is a concern that the quality of the feathers be maintained. After much research this puzzle was solved. Research seems to indicate a relationship between this quality and the overcrowding of birds. When too many ducks are housed together they resort to picking at each other. A possible solution seems to be debilling. This is not the final answer, but the practice does point out that more research is needed.

As you can see, one area of research very easily leads to another. Therefore, it’s no wonder that the Department of Poultry Science also became involved in the problems of nutrition and disease control. An example
is an investigation into vitamin K requirements. Studies in this area were prompted by laboratory observations that ducklings fed sulfaquinoxaline to treat certain bacterial diseases bled excessively when debilled. A potent form of vitamin K, added at four times the normal level, is required to help overcome this problem.

In addition, duck producers, and feed manufacturers as well, are eager to learn which types of feed mixtures are best for assuring healthy, large ducks at the least possible costs. And this, in turn, has led to research to determine if certain higher protein feed mixtures are better for ducks only at certain stages of the duck's growth. Results have led to lower feed costs and healthier, happier ducks!

Of course there are some factors that management and nutrition cannot change. For this reason the Department of Poultry Science has turned to genetics for a contribution to creating a better, more saleable duck. For example, one of the major problems facing duck producers is the amount of fat a duck deposits in its body. Approximately 25 percent of an oven-ready duck's weight is lost in pan fat drippings due to carcass fat. Thus, consumers consider serving duck a more expensive prospect than other forms of poultry and are prone to thinking of ducks as a luxury item. To encourage more sales to these consumers, research in breeding strains of ducks with less fat is now going on at the station. While this research is in progress, other work is being done, as well, in the field of genetics.

Researchers are attempting to create strains of duck which mature more quickly. This will allow producers to sell more of their product in a given period of time. Strains which mature more quickly tend to produce fewer eggs. On the other hand, ducklings hatched from high egg-producing strains are slower growing, smaller ducks. And so, research is now directed at cross-breeding these strains.

Although the amount of research described may seem like quite a lot it is not the only work being done at the station. The staff of the Department of Avian Diseases of the Cornell Veterinary College also has researchers working there. Poultry Science researchers meet regularly with their colleagues through the programs of Cooperative Extension agents and the duck producers to discuss research achievements as well as to determine where the needs for further research lie. For, the aim of the station is one of constant improvement in the quality and quantity of ducks sold. The hope is that maybe some day in the future "Long Island Duckling" will be household words!
Beyond Cayuga’s Waters . . .

Reaching Out For Greater Knowledge

Sitting in the tiny uncluttered room before the beige IBM keyboard, the attractive analyst brushed back her silken brown hair and tapped out a message in MESH code which instantly connected her unit, one of 27 in the eastern U.S., with the vast memory banks of MEDLARS.

The scene is not from a science fiction novel. It is a re-enactment of a frequent occurrence at the State University of New York’s Biomedical Communications Network terminal located in the College of Agriculture and Life Sciences.

A small room, situated on the second floor of the Albert R. Mann Library, is the site of 27 terminals which extend as far west as Chicago, south to Richmond, and north to Boston. All of the terminals are connected to each other, and to the central computer, located in Albany, via leased telephone circuits. The Biomedical terminal can be used to communicate with any of the other terminals in the system, or with the central computer.

The purpose of the terminal is to help students and faculty solve time-consuming research problems that involve everything from term papers to doctoral dissertations.

For a fee, which is used to maintain the telephone circuits, the computer can be used to search nearly two million citations taken from periodicals dating back to 1964. Any portion of the citations may be searched for a lesser fee. A free trial search service is available to determine if there is sufficient material available on a particular subject to warrant a full search.

An additional service is available for those who have already used the system to complete a search. For a fee of one dollar, their name is entered in the Library’s Current Awareness File. This means that they will be automatically updated on their previous search topic as new material becomes available. The fee covers one memory tape time span, which ranges from two to six months.

The system is based on Medical Literature Analysis and Retrieval System (MEDLARS) tapes compiled by specialists at the National Library of Medicine in Maryland. Articles taken from 2,300 journals are reviewed and organized using keywords. As many as 20 keywords may be used to file a single article, depending on the number of topics discussed in the article. These keywords are then published in the Medical Subject Heading (MESH) volume of the Index Medicus. Copies of Index Medicus can be found in Mann Library, Olin Library, and the Veterinary Library.

College staff and students seek information from the Biomedical Communication Network terminal to help reduce time involved in library research.

By converting research topic ideas into keywords, the computer can be used to retrieve information on medically related research subjects in a matter of seconds. The system will then print out a complete bibliography of articles available.

Although the system is oriented towards medical subjects, it also makes available bibliographic citations in more than a dozen related fields. Veterinary science, nutrition, psychology, sociology, chemistry, and education are a few of the subject areas covered by MEDLARS.

According to pretty Elaine Kibbe, one of four research analysts assigned to the MEDLARS terminal, “The system is at its best when involved with the cross-correlation of terms.” In other words, explains Ms. Kibbe, if a student wishes to research the topic of “Vitamin C and the Common Cold,” the computer will locate all of the available articles dealing with vitamin C. At the same time, it will locate all articles available concerning the common cold; then, on command, the computer will print out a bibliographic listing of those articles which deal with the relationship of vitamin C to the common cold. This task could require hours of tedious research without the aid of the Biomedical terminal.

Since there are nearly 8,000 keywords listed in the
MESH volume of the *Index Medicus*, the research analysts play an important role in the search process. "Analysts will try various keyword formats until the specific type of information an individual wants has been located," states Ms. Kibbe. This service is provided free of charge. Therefore, unnecessary searches are avoided.

The Mann Library terminal is unusual in that it is the only terminal in the system located at a non-medical school. "I saw the value of the system and I pushed for it," notes Prof. Ari van Tienhoven, Department of Poultry Science, the man instrumental in bringing the Biomedical Terminal to the Cornell campus.

Professor van Tienhoven first became acquainted with automated retrieval systems through reading a magazine article. He later became familiar with computer based services located in Texas and England. After hearing of a computer system that serviced New York State, Professor van Tienhoven introduced the idea to administration officials. They then began a search to fund such a facility, and their quest was to last five years. The computer terminal was finally installed in the early part of 1972.

During the first month of operation, the terminal made its services available free of charge on an introductory basis. The response from faculty, undergraduates, and graduate students was overwhelming, with 160 searches completed during the trial period. But in spite of the obvious advantages of the system, the demand for searches has fallen sharply since a ten dollar search fee was instituted.

"I feel that the system can be beneficial to all members of the academic community. It can save hours of time in the library, and can be used to keep up-to-date on research and lecture topics," says van Tienhoven. "I'd like to see it used more often."

Although the system is probably not being used to its fullest potential at the present time, those involved with the Biomedical Communications Network terminal remain optimistic. They believe the system will continue to become an accepted and vital research tool in the expansion of knowledge for the betterment of people everywhere.

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**Ecology In Action**

In case you’re wondering how goes the “ecology movement,” let it be known that it is alive and well and getting along nicely in the N.Y.S. College of Agriculture and Life Sciences. Among the latest signs of its strength and vitality is a project recently undertaken to recycle paper from various offices on the Ag Campus.

Thanks to the efforts of David Bender, a graduate student in the Department of Education, containers for collecting clean waste paper have been placed in Roberts, East Roberts, and Stone halls. The project has the endorsement and support of Dean W. Keith Kennedy. Containers used to collect the paper were furnished by the College. Officials of the University’s Department of Buildings and Properties are also pleased with this development because it will help reduce the volume of materials that must be trucked to the local landfill.

"Our purpose," explains Bender, "is to look upon this as a beginning. The plan is to start relatively small so that we can study all stages from the initial collection to the final pick-up by the salvage company equipped to feed the material directly into recycled papermaking channels. Once the flow pattern has been worked out, we plan to expand the operation to other buildings in the College. It is our hope that all Cornell offices will eventually recycle their paper."

At the present time three types of paper are being collected and sorted for recycling. These are white paper, colored paper, and newsprint. As the project expands glossy paper and cardboard will also be retrieved.

Although it is too early to predict the outcome of this activity there are indications that it is receiving good support. The first collection, representing 10 working days, yielded 400 pounds of newspapers and 50 pounds of white paper for recycling. More important, perhaps, is the healthy sign this effort represents—that the “ecology movement” lives on in the College of Agriculture and Life Sciences.

*Showing how it's done, David Bender, grad student, makes use of the recycling bins in Roberts Hall.*
What Ever Happened To Earth Day?

by STEPHEN L. SCHAEFER '73

Remember Earth Day — April 22, 1970? Do you remember the lectures, workshops, marches, and rallies that occurred on the Cornell campus on that sunny spring day?

Three years ago I wrote an article on Earth Day for the Cornell Countryman. And like many students, I became interested and involved in the day's activities and some of the planning behind those activities. In fact, I even wrote that I felt pollution would replace the Vietnam war as the great campus issue of the seventies.

Now, less than three years later, the ecology movement on campus seemed to have been forgotten. I no longer saw vociferous handbills posted around campus. I didn't hear of any specific plans for another Earth Day in the near future. In short, I didn't see any mass campus involvement in the ecology question. Was the pollution issue at Cornell really dead? Had it run its course as a popular topic of student concern? I didn't know, and I wanted to find out.

I decided to handle the question in an indirect manner. I didn't want to ask direct questions about ecology to students, because I expected that I would get a favorable response. No one would admit that ecology was a dead issue and no longer interested them. So I decided to merely seek some very basic information, and then investigate on my own to observe what actually was happening on campus.

After casually talking with several students and surveying various campus activities for a few weeks, my question was answered. Environmental protection is still very much an important issue on the Cornell campus. It's not the overt involvement of three years ago, but rather a more subtle daily involvement. If you look closely, you can find it all over campus.

One of the students I spoke to was Rick Sojda, '74, president of the Conservation Club. I asked him what projects the club was involved in. He told me that the club's activities basically center on organizational projects such as field trips, lectures and discussions, and participation in the Ithaca city cleanup program. I wondered if the club was participating in any current ecology movement. "Our participation in the movement," said Rick, "is one of educating ourselves for future roles and careers in the area of environmental protection." He pointed out that Cornell students are greatly interested in ecology, but in a more long-term sense.

"How could you measure such a long-term ecological interest," I asked? Rick pointed to the greatly increased enrollment in the Natural Resources Department as well as the current revitalization of the Conservation Club.

Last year, Rick noted, there were only about ten participating members in the club. This year, the figure closely approaches 75 participating members! I had to agree that such a dramatic increase certainly did show a great underlying student interest in the club's activities as well as a general concern for our natural resources.

Another important example of continued campus interest in environmental protection is Ecology House. The conversion of the former Residential Club into an ecology-minded living unit of 100 students last year, was a significant campus development. The group's activities include discussions and lectures, as well as the collection and sorting of recyclable materials. The residents of Ecology House are actually students who have made the ecology movement part of their daily lives.

There are also numerous other campus groups involved with ecology in a less direct sense as well as the many individuals on campus who are just leading "eco-minded" lives. In talking with some of these students, I found that they were really part of a new movement without actually recognizing it. They may attend lectures, participate in activities, or go through a daily lifestyle that shows they are conscious of the value of our environment and the problems we face in the area of pollution.

The ecology movement is still very much alive on campus. But instead of the mass rallies and marches designed to make people aware of the problems, the movement has proceeded to the next level. People and students are finally beginning to do something to solve the problems. They are becoming ecology-conscious in their daily lives. It has become a more subtle and accepted involvement rather than an open demonstration of concern. If you don't believe me, just look around campus a little more closely. Attend a Conservation Club meeting. Visit Ecology House. Stop by the Natural Resources Department. Or just notice the recyclable collection cans in the lobby of Roberts Hall. You'll find as I did, that every day has become an Earth Day.

PICTURE CREDITS

Cover—Todd Duncan; page 3, 4, 5, 12, 13, 14, 15, 17, 22 — Department of Communication Arts; page 6, 7 — Dr. John M. Kingsbury; page 9, 10 — Douglas M. Payne; page 17 — Dr. William F. Dean; page 18 — Department of Poultry Science; page 19, 20 — Todd Duncan.
Looking Ahead

College Seniors Report Their Plans

by KENNETH WALKUP '73

By this time each year, with only one semester left to go, every Senior is thinking about what he or she will do after graduation. Some will start right in working or taking more courses; others plan to take a break before facing the "real" world. The Countryman asked a sample of Seniors in the N.Y.S. College of Agriculture and Life Sciences what their post-graduation plans are at this time, with the following results:

<table>
<thead>
<tr>
<th>GRAD SCHOOL</th>
<th>NOT JOB</th>
<th>SURE MILITARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>39%</td>
<td>27%</td>
<td>25%</td>
</tr>
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We compared this with the best information available about 1972's graduates:

<table>
<thead>
<tr>
<th>GRAD SCHOOL</th>
<th>JOB</th>
<th>MISC. MILITARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>29%</td>
<td>31%</td>
<td>38%</td>
</tr>
</tbody>
</table>

It seems obvious that some of those planning to continue their education are going to have their applications rejected, and will have to make other plans.

Most of those Seniors that told us they plan to work right after graduation have a job already pinned down. About 80% of that number plan to work in the field that they majored in here at Cornell. Undoubtedly, the number of job-holding 1972 grads is higher than the figures for that year indicate, since the miscellaneous category includes many people about whom nothing at all is known.

It's still too early to say exactly how many Seniors will get jobs and how many will head for Europe or the beaches of California. But for now, we have at least some indication of what students soon to face the outside world are planning to do after graduation.

Library Enlivened By Tropical Foliage

A library may seem hardly an ideal place for plants, but the N.Y.S. College of Agriculture and Life Sciences' Library is brimming over with them.

The library is being used to test large numbers of tropical foliage plants to see how they will perform as accent plants in interior landscaping.

Plants being tested are *Ficus nitida* and *Schefflera actinophylla* (umbrella tree). They are kept in the library as part of a study to develop the best method for acclimatizing tropical plants to conditions found in most homes and offices.

These plants, 96 in all, are placed in the library's two reading rooms and in the periodical and reference rooms for observation for six months.

The study is being conducted by John C. Vlahos, a graduate student working under the direction of Prof. James W. Boodley in the Department of Floriculture and Ornamental Horticulture at the N.Y. State College of Agriculture and Life Sciences, Cornell.

Vlahos says the library was chosen to test these plants because its interior conditions are similar to those found in other indoor situations.

"Unfavorable interior conditions including poor light and low humidity often send these plants into deep shock causing irreversible damage," Vlahos points out. Typical symptoms of environmental shock include leaf yellowing, severe leaf drop, and poor growth leading to slow death of the plant.

Vlahos suggests that the solution is to condition or acclimatize these outdoor-grown foliage plants in the greenhouse before placing them in homes, offices, shopping malls, and other establishments.

He points out that little is known about conditioning such plants.

To find the answer, the Cornell researchers began experimenting with *Ficus* and *Schefflera* plants this summer. For two months, these plants were kept in a greenhouse and were treated to different levels of light and water. The plants then were moved to the library where they will be observed until next March.

Vlahos reports that a group of *Ficus* plants kept under low light and given high moisture in the greenhouse are doing better than those given high light and low moisture. All *Schefflera* plants, meanwhile, are doing very well so far regardless of treatments given.
Richard E. Redmond '52, Scipio Center, N.Y. was elected Secretary of Dairylea Cooperative Inc. at their October annual meeting. He replaces James R. Donnan, who succeeded Lester Martin as President of Dairylea. Redmond, a Cayuga County dairyman, has been a Dairylea Director since 1967. His oldest daughter, Christine, is a junior at the College of Agriculture and Life Sciences and son John is a sophomore. Mrs. Redmond is also a Cornell graduate (H.E. '52). Daughter Ann is a freshman at SUNY College at Brockport.

Lee A. Traver '64 (M.Ed. '65) was recently named Chief of the Bureau of Agricultural Education, State Education Department in Albany, replacing Harold L. Noakes '34 (Ph.D. '51) who retired on September 1. Mr. Traver joined the Bureau of Agricultural Education in 1969 and subsequently moved to the position of Associate in the Bureau of Supervision, which he held until his current appointment. Dr. Noakes had served as Chief since 1966.

Stanley V. Oakes '40, Rexford, New York has been elected President of ATANY — Association of Teachers of Agriculture of New York, succeeding Richard Strangeway '50, Grahamsville, New York. Mr. Oakes teaches at Saratoga BOCES.

Allen K. Child '42, Malone dairyman, was elected Vice President of New York Farm Bureau at the November annual meeting. He succeeds Harold L. Hawley '36, Weedsport. Richard McGuire was re-elected President of the organization.

E. R. Smith Scholarship

Friends of the late Edwin R. Smith of Popular Ridge Farm, Seneca Falls, have established a scholarship in his memory at the N.Y. State College of Agriculture and Life Sciences, Cornell University.

Students in the College will be selected for the scholarship on the basis of character, academic ability and proven financial need. Preference will be given to students whose families are members of the Eastern Milk Producers Cooperative Association, to transfer students from a two-year college, and to upperclassmen.

Smith, a member of Eastern Milk Producers Cooperative Association for nearly 30 years, was elected to its board of directors twice, serving as president for two years. He was a member, also, of the New York Holstein-Friesian Association and served as a director and member of its executive committee.

An engineer, Smith was chief executive officer of the Seneca Falls Machine Company and had received a life membership from the Society of Manufacturing Engineers.

Sea Grant Film

The potential for improving the quality of life for users of New York's 2,400-mile coastline along the Atlantic Ocean and the Great Lakes is examined in a new educational film just released from Cornell University.

Produced for the New York Sea Grant Program, the film, titled New York Faces the Sea, focuses on some of the major coastal problems and shows how the Sea Grant Program is beginning to help solve these problems so as to benefit the people of the State.

The Sea Grant Program, modeled after the Land Grant system, was launched early last year in a major effort to make wise use of largely untapped marine resources for economic development, increasing job opportunities, recreational development, and ecological advances.

Pointing to problems facing the State's long neglected coastal areas, the film shows results of careless use of the marine and Great Lakes resources in terms of loss of economic opportunities to coastal communities, and aesthetic and ecological damage.

The color film, which runs for 13 minutes, is available for loan from the Film Library, Room 31, Roberts Hall, Cornell University, Ithaca, N.Y. 14850. School groups wanting to view the film may obtain the print from Cornell.

The film also is available (for non-school groups only) from three other locations: Sea Grant Advisory Service, Marine Sciences Research Center, SUNY, Stony Brook, N.Y. 11790; Sea Grant Advisory Service, SUNY College at Brockport, 251 Hartwell Hall, Brockport, N.Y. 14420; and Program Office, N.Y. State Sea Grant Program, State University of New York, Twin Towers, 99 Washington Ave., Albany, N.Y. 12210.

Professor Travis Retires

Prof. Bernard V. Travis, was named Professor of Medical Entomology and Parasitology Emeritus by the Cornell University Board of Trustees upon his retirement Oct. 31.

He has been chairman of the Department of Entomology at the N.Y. State College of Agriculture and Life Sciences, Cornell, since July, 1970.

A specialist in the control of insects that affect the health and welfare of man, Travis played a prominent role in the research and development of a series of insect repellents during World War II.

In addition to his most current research interest in the control of black flies, he has compiled a six-volume reference guide on insects that transmit disease.

The 3,000 page publication, which took 17 years to complete, describes more than 17,000 insects of medical importance.
Sponsored by the New York State College of Agriculture and Life Sciences, a Statutory College of the State University, Cornell University

Chairman: Dr. Kenneth L. Turk, Director, International Agriculture

9:45 a.m.
Welcome and Introduction — Dean W. Keith Kennedy

10:00 a.m.
Perspectives From Washington (Speaker to be announced)

10:45 a.m.
Questions and Discussion

11:00 a.m.
Agriculture and the Environment
Introduction by Dr. Raymond C. Loehr, Prof. of Agricultural Engineering
(Speaker to be announced)

11:45 a.m.
Questions and Discussion

12:00 noon
College Alumni Association Luncheon

2:00 p.m.
Chairman: Dr. Kenneth L. Robinson, Prof. of Agricultural Economics
Who Will Control Agriculture?
Dr. Harold F. Breimyer
Prof. of Agricultural Economics, University of Missouri

2:45 to 3:30 p.m.
Panel: Three New York State Farmers
Panel Comments and Questions
The Horse Makes A Comeback
ON THE COVER — Once the horse was a vital part of everyday life, whether on the rural or urban scene. He was indispensable for transportation, and power for industry and agriculture. With the coming of the automobile, the horse was no longer in demand, and his numbers diminished. The downward trend did not continue, however, and the population of horses in the United States is now steadily increasing. However, the horses today are not the heavy work horses of yesteryear. Almost 75 percent of the horses in the country are Western pleasure horses, and an even larger percent are riding horses of one style or another.

PICTURE CREDITS
Cover — Jane S. Tutton; page 3 — Nancy B. Cole; page 3, 4, 10, 16 — Department of Communication Arts; page 5 — Cornell University Polo Club; page 6 and 11 — Joseph Gomber; page 7, 8, 9 — Ralph Charles.
On the Comeback Trail...

People and Horses in New Situations

by NANCY B. COLE '71

When the automobile first began to appear on the American scene, it was often greeted with derisive hoots, and shouts of "get a horse" added to the chagrin of any motorist unlucky enough to have a breakdown where there was an audience. But the automobile was more than a passing fad, and motor transportation is now firmly established. Indeed, between 1920 and 1959, the number of horses in the United States dropped from 25 million to only 3.2 million. Cars and trucks became the important means of transportation. Gasoline powered tractors took the place of horses on the farm. Most agricultural colleges and universities, including Cornell, abandoned their research and study programs related to the horse, and sold their teams.

The downward trend did not continue, however. It is now estimated that there are between 6.2 and 7.5 million horses in the U. S., and the number is increasing at the rate of eight or ten percent per year. The USDA predicts that by 1980 there will be some 14 million horses in the nation. The reason for this upswing in the horse population is the increased interest in horseback riding and the training and showing of horses as forms of recreation. The role of the horse has changed from a means of transportation and source of farm power to a leisure time companion and source of pleasure and recreation.

I talked with Prof. Samuel Sabin, Extension Horse Specialist in the N. Y. S. College of Agriculture and Life Sciences, about the horse in New York State. The horse is the basis of an important industry. Professor Sabin estimates that the horse industry contributes almost as much to the economy of the State as does dairy farming. Pari-mutuel betting on harness races and thoroughbred races provides the state government with over 200 million dollars a year in taxes, and horse racing of all kinds employs around 100,000 people. Expenditures related to racing contribute to the economy also. Particularly important are transportation, lodgings, food, and so forth bought by race fans and those travelling with horses. The expenses involved in raising and training a race horse are also high. By the age of two, when he first enters the racing circuit, a young horse has cost $10,000 or more.

However, of around 200,000 horses in New York
State, only around 50,000 are race horses. Most horses are owned simply for pleasure by individuals who have one or two horses, enjoy riding, and perhaps enter a few shows also. Each of these horses represents an expenditure of $500 to $700 a year in feed, tack, boarding, trailering, equipment, and other upkeep. This is another $75 to $100 million total in business added to the state’s economy.

To many people, riding horses have something of an aura of glamour, and are thought of as belonging primarily to the rich. Interestingly enough, this is not entirely so. The percentages for each income level among horse owners seem to be almost the same as the percentages in the population as a whole. Nor are horses found exclusively in the rural regions of the country. Many are housed in the suburbs, with the distribution of the horse population closely related to the distribution of people, with the exception of the metropolitan areas.

Polo, foxhunting, rodeo, steeplechase, flat racing, trail rides, wilderness pack trains, horse shows—all sorts of people participate in many different activities involving horses. The fastest-growing kind of riding, and the one responsible for the great increase in the numbers of horses over recent years, is with the stock saddle, or Western riding. Versatile enough for trail ride, show, and family outing, it is the Western pleasure horse who is taking the country by storm. Over 75 percent of the horses in the country are ridden Western, and this is also true for New York State.

With the increasing numbers of horses in the State comes a demand for more information about training, raising, and caring for horses as well as riding. Unfortunately there is a lot of misinformation circulating, and Professor Sabin sees the important job for the future as that of disproving false ideas. There are many self-styled experts in the field, and no regulations regarding licensing or other types of credentials. Compared to other types of agricultural research, the nutrition of the horse, his growth and development, are greatly neglected. A few bulletins are distributed by Cooperative Extension, but most of these relate to the 4-H Horse Program and cover riding, training, and care of horses rather than more scientific research.

The 4-H Horse Program is a recreational and educational program for young people between the ages of nine and 19. There are presently some 10,000 participants; three quarters of these are girls. The program includes training and showing horses in such classes as Western pleasure horse, English (hunt seat) riding and jumping, game classes such as barrel races and other timed events, trail classes, and conformation judging as well as equitation classes where the rider rather than the horse is judged. Throughout the summer there are many local shows, culminating in the state-wide competition each September at the State Fair in Syracuse.

In addition, 4-H now has a polo program. This is still quite small, with only a few clubs involved, but seems to appeal more to boys than the regular horse program.

Another new program involving 4-H is attempting to introduce urban youngsters to the horse. It has been tried experimentally among disadvantaged kids on Staten Island with some success.

The horse at Cornell plays an indisputably minor role in the general scheme of the University. Yet, there are several horse-related activities and programs in the Department of Physical Education, in the Department of Animal Science in the College of Agriculture and Life Sciences, and in the N. Y. S. Veterinary College. As elsewhere around the State, the amount of interest in horses at Cornell has increased in the last several years, and programs, both recreational and scientific, seem likely to expand.

For twenty years, there was no course on horses in the College of Agriculture and Life Sciences. Then, in 1967, the Animal Science Department began a general course on horses. Now there are three horse courses, and enrollment numbers are increasing. A new course in training horses is being considered and may be offered soon. At the Riding Hall, a similar increase in interest is noted. Mr. Charles Lent, who has taught equitation for eighteen years, has seen a marked increase in the number of students taking riding lessons over the past few years. The N.Y.S. Veterinary College and the College of Agriculture and Life Sciences held their second annual Cornell Equine Conference this year. These are a few of the indications throughout the University of the growing interest in horses.

Riding at Cornell is self-supporting, and enjoys the somewhat anomalous position of what Mr. Lent calls "stepchild of the athletic association." All of the money to operate the riding hall and stables comes from fees charged for riding lessons, and from those students who board their horses at Cornell.

Originally, riding at Cornell was part of the ROTC
program, and mainly to accommodate those officers who played polo as part of their training. However, after World War II, the Army discontinued riding, withdrawing their funds and their personnel. There might be no riding at Cornell today but for the efforts of Robert Kane, then director of athletics, Deane Malott, president emeritus of the University, and Albert Mitchell, an alumnus, as well as Dr. S. J. Roberts, long a faculty member at the Veterinary College. Through their efforts, and the interest and support of alumni and students, the riding hall was retained and continues to exist only through the private support of interested individuals.

Students may take riding lessons for a fee and receive physical education credit for the term. All equitation classes are taught “hunt seat” or “forward seat riding,” the seat used for hunting and jumping. The facilities and staff at present cannot handle added classes, such as western or stock seat riding, or the more advanced classic seat riding such as dressage or haute écule. However, there are clinics from time to time, sponsored by the Polo Club, covering various aspects of riding such as dressage or the Olympic 3-Day Event, depending upon the available guest instructors. This spring, March 31-April 1, they are planning a 3-Day Event clinic with Lockie Richards of the Saratoga Springs dressage center. This clinic will cover stadium jumping, cross-country, and dressage. In the past, other clinics have brought experts such as Margaret Gafford, an international competitor, and Olympic rider George Morris to Cornell. These clinics, and the shows which are also organized by Mrs. Irving Allen and Mrs. Isabel Longaker, widen the range of riding activities at Cornell and in the Ithaca area, and also raise funds for the Polo Club.

The Polo team does receive some support from the University, but must pay much of its own way. It even has to pay board on its polo ponies housed at the riding stables though at a reduced rate.

A recent development is recreational polo, which meets once a week throughout the school year, using the polo ponies belonging to the team. Participants must pay a fee for the term, but will receive physical education credit equal to those in equitation classes. All of the participants are girls, although Mrs. Jane Tutton points out that it is not officially a girls’ Polo team. However, that seems to be what it has worked out to be, and the girls are planning to meet teams from other colleges for some informal competition.

Plans are being made for a new equine complex including riding hall, stables, outdoor rings, and trails to be built on Freese Road, near the Liddell Laboratory. Mrs. Tutton spoke with enthusiasm about the project, which would greatly improve facilities for all of the riding activities at Cornell. The project is to be financed on a matching basis by private contributions, and the University. One man has promised $250,000 toward the new riding hall, but at least another $250,000 of private contributions is being solicited from alumni, students, and other supporters of riding.

Elsewhere in the University the growing popularity of the horse is reflected in the increased attention given to research on various aspects of horse nutrition, physiology, and disease. The Equine Research Program, a joint program of the College of Agriculture and Life Sciences and the Veterinary College, was established in 1966 to study the relationship between nutrition and various bone and joint diseases of the horse. However, Dr. John E. Lowe pointed out, so little had been done previously on the horse, compared to other animals, that it was necessary to begin with some basic nutrition studies to determine minimum requirements of calcium, phosphorus, protein, energy, and various nutrients.

In addition to the nutrition studies, the program has also worked on the importance of the thyroid gland to the growth and function of the horse. Other studies concern the digestive activity of the horse, bacteriological studies of the caecum, and research on intestinal physiology.

The Laboratory for the Study of Equine Infectious Diseases has made a very important contribution through the development of the Coggins test to detect horses that are carriers of equine infectious anemia or “swamp fever.” The Coggins test, named after Dr. Leroy Coggins who headed the research project, can determine whether a horse is a carrier or not in a simple, inexpensive lab test that requires only a 10cc sample of blood from the possible carrier. If this test is certified by the Department of Agriculture it will make it possible to screen large numbers of horses to identify carriers. This hopefully will allow the disease to be contained and eventually eliminated. There is as yet no cure or treatment for equine infectious anemia.

Other people throughout the Veterinary College are also working on research aimed at increasing understanding of the normal physiology of the horse, as well as his various diseases.

These are but a few of the many recent developments horse lovers see as signs of a bright future. But while the combination of high recreational interests, important economic considerations, and the demand for much needed equine research may not entirely boost horse numbers to former strengths, it is clear to all concerned that the horse is making a most impressive comeback.
Students Help Community . . .

The Rebuilding of Big Flats

by LINDA J. CAMP '73

Not so long ago Big Flats was a nice, quiet community in southern New York. Then in June something called Hurricane Agnes happened, accompanied by 12 inches of rainfall. Suddenly Big Flats wasn’t quite so peaceful any more. The people in the community have been working hard to put things back together again since the floods, and since September Cornell students have been working right along with them. Eight seniors in the Landscape Architecture program from the College of Agriculture and Life Sciences have been helping to generate new ideas for rebuilding much of the damaged town.

The students became involved in Big Flats through a course with Prof. Marvin Adleman entitled “Landscape Architectural Design-Land Analysis and Environmental Planning” which attempts to expose students to real-life problems.

“I was looking for a project that would be within a traveling distance of one hour, so naturally I thought of the areas hit by this summer’s floods. Every kind of problem that I wanted students to deal with in the course exists there,” commented Adleman.

Cooperative Extension, which operates a program in Community Resource Development, proved to be a good starting point in initiating the project. Through Cornell’s Extension offices, Professor Adleman was able to make contacts in various counties and tour the damaged areas prior to the start of the semester. Big Flats was finally decided upon because of its accessibility and because local residents were receptive to having students contribute possible solutions. In addition, certain factors were present that seemed to offer much challenge for the students, such as a severely damaged town center and the great potential for growth possessed by the area.

The class attacked the problem of rebuilding Big Flats in a variety of ways. First of all, an in-depth analysis was conducted with each student concentrating on a specific aspect. One dealt with a soil inventory. In another case transportation and recreation studies were focused on from several standpoints, including present and future needs of the community. Specific problems of the location also came into play, including the Chemung River and its flood plain, but other important considerations were Route 17, which divides the town in half, the slope of the landscape and the Chemung County Airport.

In formulating and working out their ideas, the students relied on several techniques. One important method was observing the actual site and taking photographs of it. Some students made use of overlays — each overlay showing a different element that had to be considered. When all of the overlays were viewed together it became easier to determine where priorities should be considered. But above all, the students consulted extensively with the Big Flats Town Council. The Council (continued on page 10)

Professor Marvin Adleman involves students in real-life problems and situations with a focus on community improvements. An example is their contributions to the rebuilding of Big Flats, N.Y., through the development of an Open Space Master Plan designed to help local residents decide the priorities needed to restore the community in ways that benefit everyone.
Learning By Doing
A Countryman Photo Feature By Ralph Charles '74
Students Practice Woodland Management
Cornell students have an opportunity to combine the learning of good forestry and community service through a public demonstration of hardwood thinning on the Ronald Beck Farm near Freeville. It is all part of Prof. Robert R. Morrow's woodland management course, which is designed to provide basic information for making sound decisions that involve forest practices. Students established three demonstration plots in a stand of sugar maples (a and b), New York's dominant species. Their work involves measuring the tree crop (c) and (d) determining the age and growth rate of the stand. Trees to be cut or killed are marked (e) based on a management plan that promotes a sustained yield. Marketable trees are harvested (f) with care to protect nearby valuable species. Competing, non-saleable trees are chemically killed (g) to allow those with a more promising future to thrive. The final step involves the treatment of the remaining stumps (h) with materials that reduce re-sprouting of the harvested trees.
BIG FLATS continued from page 6
itself furnished the class with a budget to help pay for graphic materials and other expenses.

By the end of October the class was able to finalize a large portion of its work. A formal presentation of the ideas was made to the Big Flats community and was received quite favorably. One notion that was introduced to the community was the possibility of relocating Route 17 so that it would pass by the community instead of through it. This relocation would have Route 17 acting as a dyke to help ward off future disasters.

The class as a whole is now busy with other projects, but several of the students are continuing to work on their specific area of interest. Tock Ohazama is pursuing possibilities for the town center, while Roland Aberg is still studying possibilities for recreation.

All of the students are in agreement that the most rewarding part of this project was getting to know the town’s people. Though the residents were somewhat skeptical at first about what the students would have to offer, in a short period of time the students were able to establish a very good relationship with them. And, too, there was the reward of reaching beyond normal kinds of campus learning experiences and delving into some of the real problems in life.

Projects, such as this one in Big Flats, seem to be on the rise at Cornell, and many of them are being welcomed by both faculty and students because of the kind of exposure it gives to realistic working situations. Above all, projects such as Big Flats are a way of extending the College’s educational resources so that there is a greater rapport between this institution and the public.

Students Study Fall Creek Environment

What does a dam do to the waters it spans? To the people who use it? To the fish in the streams?

The answers to these questions form what conservationists, engineers and city planners call an “environmental impact analysis.” This spring, some 25 Cornell University graduate students will explore, observe, measure, analyze, calculate, survey and otherwise investigate the area around Fall Creek to determine the environmental impact of a hypothetical dam project.

The students are all enrolled in Natural Resources 602, a graduate seminar taught by Lawrence S. Hamilton, professor of natural resources in Cornell’s New York State College of Agriculture and Life Sciences.

“This may be the most multi-disciplinary course offered at the University,” Hamilton said, explaining that the students represent the fields of soil science, hydrology, wildlife management, city and regional planning, forestry, sanitary engineering, law, agricultural economics, fishery biology, ecology, rural sociology and agricultural engineering.

Environmental impact statements are now required by law, according to the National Environmental Policy Act of 1969, for any project involving expenditure of federal moneys. To date, however, the government has issued no clear outlines for formulating the analyses and statements.

“It’s just a matter of time,” Hamilton said, “before similar legislation is passed in each of the 50 states.”

Anticipating introduction of such a bill in the New York State Legislature, Hamilton will direct his class in formulating guidelines for carrying out environmental impact analysis. This is a relatively new field, he explained, and not enough is known about the feasibility of different methods for conducting analyses.

“New York State has no method as yet,” Hamilton said. “We may be of some help.”

State representatives will attend the seminar as contributors and students. Hamilton feels that this community involvement in the project, as well as the “real issues” being discussed, give the course a “high relevance factor.” Student enthusiasm, he reported, is also high.

Hamilton said there is a strong possibility of holding a conference under joint sponsorship with the President’s Council on Environmental Quality (CEQ). Ideally, researchers in environmental analysis would meet at Cornell with a view to improving CEQ guidelines and procedures.
Toward an Educational Mix . . .

Updating the Teacher’s Role

by BARBARA REHM ’73

Practicality may be a distinguishing characteristic of the education offered in the College of Agriculture and Life Sciences and the College of Human Ecology, but motivating the practical training are important philosophical theories of education.

Each professor has his own theory about what college education should accomplish and what he, as a teacher, should do toward accomplishing that educational goal. It is interesting to note what some of those philosophies are and what implications they might have for the future of higher education.

A prevalent attitude of professors is that they are losing faith in the traditional methods of education as the most effective ways of getting students to learn. Lecture classes, in which the teacher serves as an “information dispenser,” are being questioned . . . and abandoned.

Professor Novak does not see his role as a teacher to be an “information dispenser,” but rather to involve his students in discussion of educational and intellectual goals.

Prof. Joseph Novak, professor of science education, for instance, believes that with graduate students, “my role is seldom to present information.” Instead, he and his students “talk together a lot and read together. The best way to get information is not to listen to someone. The best way to clarify it is for each student to get some personal command of the ideas.” Because of this philosophy, Professor Novak does not give exams—“intellectual straight-jackets” in which “students respond in ways you think they should.” Instead he has his students write papers on anything that is relevant to the issues in class and important to them. His overall aim in his approach is to “have (his students) identify an academic mission in life” and to increase their commitment to the field of education.

Similarly, Prof. D. Bob Gowin, professor of education, is “unsympathetic with merely a large lecture course for Cornell seniors.” His approach in Education 470 class is to create smaller seminar-sized sections based upon expressions of students’ interests and concerns. The first days of planning each semester are somewhat of a “circus,” but because the students help shape the work they do, they “realize the most fundamental thing about learning; each person is responsible for what he or she learns.” In a course such as Educational Issues, students are responsible for identifying real issues “which sometimes may make them angry or sufficiently committed so that they think and take action.” Professor Gowin believes that students who do take responsibility for their own education are the ones who really “get smart” about themselves and the world they live in.

Responsibility is the key word in much of today’s educational philosophy. Miss Irene Imbler, assistant professor in Community Service Education, “tries to teach personal responsibility for work done and personal choices.” To encourage this, she structures her classes in adult education in such a way as to create an open, accepting, non-judgmental learning situation and decrease the competition among students. Her format, like Professor Gowin’s, “gives students the right to choose what they want to do. (They are allowed to) try out alternatives and fail without feeling they are always being evaluated.” To facilitate this, she works out contracts with her students in which they must choose learning goals for themselves and establish their own time schedules in which to meet those goals. She grades on the basis of how well her students are meeting their own goals as indicated in a series of personal conferences and a final assessment paper.
Contract teaching is considered an innovative approach to education. In the Department of Education, Prof. Frederick Stutz, professor of history of education, is also experimenting with it. As does Miss Imbler’s, Professor Stutz’s philosophy behind this approach has to do with relevancy to the student’s life. Miss Imbler, for instance, sees education as a “process in which people use acquired knowledge to help them solve problems and meet needs relevant to them.” In teaching process, there is a de-emphasis on content.

Professor Stutz seeks to have his students “put together” their Cornell experience. He feels that each student, through his college education, should gain the capacity to see how his own education feeds him and, through him, the world around him.” He raises the vital question of “what is the message of this (what I am learning) to the world of mankind?” Again, there is a de-emphasis on content; his attitude in class is to ask “what is your position?” and not “what do you know about—?”

Students have often complained that in order to realize the relevancy of their education, they must be able to apply it to reality. Professors, too, have acknowledged this problem, and their philosophies reflect this. There has been an increasing emphasis on field experience away from the Cornell campus.

Notably, a “Human Ecology in the Field Program” is presently evolving. It is based on the premise that Human Ecology students should have something that other students don’t have; the “something” is “a way of looking at social problems and social issues,” says Ms. Jane Knitzer, assistant professor in Human Development and Family Studies.

Professor Knitzer sees field work as an important element in helping students generate their own learning agendas and at the same time “think more critically about social problems and processes.”

But, she cautioned, “to send (a student) out for experience is not enough. To send him out and help him make sense of it is what education is about.”

This, and responsibility for education, are part of the guiding philosophy behind a new interdepartmental course. The course, I.D. 360 — Problem Solving, is set up in such a way that groups of students and faculty, representative of various departments, establish themselves as a learning group with a specific problem in mind which they want to learn to solve. In most cases, the proposed problems deal with social issues either on or off campus, and the methods proposed for solving the problems involve field experience and social processes.

One teacher who hopes to get students in his classes involved in the Human Ecology in the Field Program is Professor Robert Bartholomew, assistant professor in the professional design area of the Department of Design and Environmental Analysis. He points out that in a field like design, a great deal of learning comes about through critiques which are objective in their functional considerations but opinion on aesthetic issues. Therefore not only should the student be exposed to the professor’s opinion, but he should be allowed his own say as well as be exposed to other designers’ visual viewpoints.

Professor Bartholomew sees the field experience as an opportunity for students to be exposed to that opinion and to spend eight hours a day in design instead of dividing their time as they must while they are full-time students. This helps the students to form their own philosophies of design rather than mimic those of their professors, as is the case in many professional design schools. This detailed exposure also helps the students develop a greater awareness of functional and struc-
tural design requirements.

But, like Professor Knitzer, Professor Bartholomew is hesitant to give this experience to every student. "We want to make sure that when we send students out in the field, they will be able to take advantage of the learning situation. If they are not ready, it can harm their professional development, and it reflects negatively on both the student and the college."

This presents a dilemma experienced by many of the instructors in both colleges. On the one hand, they are responsible to the world of potential employers for being sure that students have a knowledge of certain facts associated with their field.

On the other hand, they have a responsibility to themselves and society in general to help students become better people.

The result is often frustration for the teacher . . . and confusion for the student.

One who shares this view is Mrs. Eleanor Macklin, lecturer and extension associate in Human Development and Family Studies. Her goal is to be a "humanistic teacher." She is "less interested in giving facts" than in knowing whether "other people will be better because they have known my students and that my students will be better for having been in my classes." The dilemma, she says, is that "it takes a tremendous amount of personal interaction. In a class of 100 people, I feel very frustrated. I don't know whether large scale teaching will accomplish my goal."

But she is trying to make it do so. In her class of 100, she has memorized everyone's name and face and, where she has the opportunity during field experience, discussion sections, and grading papers, she has learned more about the persons she is teaching.

Professor Bartholomew also finds that his knowing his students is critical in their development. He says that teaching "should require a lot of time, dedication and interest in students." He needs to know his students and their background to help them in group situations and projects where they must get along with other people.

To a designer, this is crucial because "being able to merge efforts with other people is a common professional occurrence."

Knowing his students comes as a natural result of Professor Novak's general educational philosophy and his approach to class. Although science education, in itself, can help students get a "personal orientation and personal sense of security," Professor Novak relates his goals in science education to the goals of intelligent people in religion; that is, they both hope to improve human life in some small way. Obviously, in order to reach his students at this level, he must know them . . . as well as help them know themselves.

For instance, he finds that "people that do not have their personal lives in order can not write papers on topics relevant to them." Therefore, he ends up doing a great deal of personal counseling to help his students find direction in their personal lives.

One of the problems in solving the dilemma of divided educational responsibilities is a product of trying new approaches to education. Miss Imbler has experienced this. Because what she is presenting in classes is a new form of learning, her students require a great deal of guidance, a "lot of hand-holding and follow up." Students are so used to having external pressures and motivation for learning, as in the traditional competitive situation where grades are of prime importance, that when she tries to build inner control, the students don't produce as much. "If students were accustomed to learning this way, they could get more active learning, more cognitive learning."

But until the day when students receive personally oriented education earlier in life, Miss Imbler will continue to emphasize process learning that can be incorporated into the person, applied to problem solving situations, and thus encourage "personal growth, inner control, and the ability to handle one's affairs."

In chatting with various professors about their philosophies of education and their approaches to instruction several themes become apparent. The first is that college education today, at least in the College of Agriculture and Life Sciences and the College of Human Ecology, is aimed at helping students grow and develop as people. Professors are getting to know their students as people, are helping them to know themselves, and thereby are helping them to find meaning or relevance in their own lives as well as in society.

A second theme, more specifically associated with these two colleges, is providing meaningful experiences for students, experiences that will encourage them to take responsibility for their own learning. This is tied in with the more universal goal of teaching students how to solve problems, not how to memorize facts.

Finally, the theme of time becomes apparent. To reach these other goals, to teach effectively, professors feel a need to spend time with each individual student, to have some sort of personal interaction. Whether such a thing is possible in a large university like Cornell is, as Mrs. Macklin suggests, questionable. And yet the effort continues.
AG FUND
Tops $1 Million Goal

The College of Agriculture and Life Sciences Fund, better known as the Ag Fund, has surpassed its goal of $1 million. Two recent bequests have brought the total to $1,080,563.01. This sum of money has been contributed by alumni, faculty, and friends of the College in amounts both large and small. In addition, there have been gifts from corporations and foundations. Many of the gifts are given as scholarship grants or endowments. Others may be used by the College for any worthwhile project.

The two most recent bequests that put the Fund over the $1 million mark were from the estates of Mrs. Marcelle Morgenthau and Dr. Hanna Eliza Jenkins.

Mrs. Morgenthau was the second wife of Henry Morgenthau, Jr., a Dutchess County dairy farmer and apple grower who attended the College of Agriculture in 1912 and 1913.

In 1922, he purchased the American Agriculturist in order to advance his interest in conservation and modern farming methods. He continued to publish it until 1933 when he joined President Franklin D. Roosevelt’s cabinet to become Secretary of the Treasury.

In New York State, Mr. Morgenthau served on numerous commissions dealing with conservation and agriculture. He headed the Federal Farm Board and its successor the Farm Credit Administration.

Mr. Morgenthau died in 1967.

It is Mrs. Morgenthau’s will that indicates the gift of $200,000 to the College. The gift will be used as an endowment to provide scholarships and fellowships in Agricultural Finances.

The College received a gift of about $120,000 from the estate of Dr. Hanna Eliza Jenkins in Walton, New York. The College will be receiving her residuary estate which includes her property “Mountain Home Farm” and her personal assets. The estate will be used in aid of research under the direction of the head of the Department of Plant Pathology and the Dean of the College. Dr. Jenkins also left her library to the College.

Dr. Jenkins was a patriot and quite a distinguished scientist. She spent much of her time in Brazil doing research and consultation for the government of Brazil. At the time of her death in November of 1972 she was 89 years old.

The Ag Fund was first established in 1969 by the College of Agriculture and Life Sciences Alumni Association, in cooperation with the College Administration and the University Development Office. The Fund was initially set up to raise $1 million, but since this goal has been reached, the Fund has been permanently established.

The objectives of the Fund are: to provide scholarships for undergraduate students of proven academic calibre and demonstrated financial need; to support the College’s initiative in establishing innovative instructional programs; and to act as the vehicle whereby alumni and other friends of the College may participate in their own way in the future growth and development of the College.

Laing E. Kennedy, ’63, of the College was appointed in September, 1972, as Assistant to the Dean to coordinate the activities of the Fund; to finish the $1 million drive and set up the Fund on a permanent basis.

The method of operation for the Fund will incorporate alumni, students, and faculty members of the College into an Advisory Committee for the Fund. This Committee, along with the Staff Coordinator, will hopefully ensure a smooth continuation of the Fund to build Alumni relations and encourage giving for scholarships and innovative educational programs which are so desperately needed by the College.

Those appointed to the Advisory Committee by Dean W. Keith Kennedy are: Dr. Earl Brown, Associate Director, Resident Instruction, Ithaca; John Dyson ’65, President of the Dyson Fund, Millbrook; Dr. Wendell Earle, Professor of Marketing, Dept. of Agricultural Economics, Ithaca; Myron Fuerst ’29, President, Fuerst Brothers, Inc., Rhinebeck; Robert J. Haley, Director of University Development at Cornell, Ithaca; Joseph P. King ’36, Administrator of the Regional Market, Rochester; Raymond J. Lanzafrance ’74, student in the College, Ithaca; Albert R. Lounsbury ’55, President of the Alumni Association, Saratoga Springs; Pamela Murtaugh, student in the College, Ithaca; David Nagel ’49, President, Eastern Mutual Life Insurance Co., Clifton, New Jersey; Charles E. Palm, Liberty Hyde Bailey Professor of Agricultural Sciences and retired Dean of the College, Ithaca; Charles H. Riley ’38, Group Vice President, Agway Incorporated, Syracuse; John J. Sullivan ’62, President, Agri-Systems, Inc., Leroy; Helen Wardeberg, Chairman, Dept. of Education in the College, Ithaca; and Robert Ladd ’43, Research Management Corporation, Poolesville, Maryland.
COUNTRYMAN
CAPSULES

Steven Kearl '71, Ithaca, N. Y., has been hired by Cornell's Department of Natural Resources as an Extension Aide. Formerly a Countryman staff member, Kearl's new editorial duties include responsibility for the Department publications Conservation Circular and Conservation Comments. He also prepares materials and makes arrangements for a variety of short courses, conferences, and workshops conducted by the Department's Extension staff.

C. V. Plath (Ph.D. '47) is leader of a U. S. Department of Agriculture team with the Agency for International Development Mission in Asuncion, Paraguay, that is helping to build a marketing service for Paraguayan farmers.

James Sample '63, Avon Lake, Ohio, has been appointed editor of Weeds, Trees, and Turf magazine, which is published in Cleveland. Sample majored in communication arts while at Cornell.

Gary Fisher '70, Forest Hills, N. Y., has been appointed retail sales manager for WCBS Radio in New York City. Prior to his appointment Fisher was an account executive in the WCBS retail sales department and he had also been associated with WGBB in Merrick as a sales executive. While at Cornell, Fisher was active in WVBR programming and worked in sales at WHCU.

H. Joseph Pendergast '38, Cobleskill, N. Y., has been elected president of the New York State Association of Agricultural Fairs. Pendergast has been business manager of the New York Guernsey Breeders Cooperative since 1960. He formerly served as a Cooperative Extension agricultural agent in Schoharie County.

Anson Rowe '07, who died in June, 1970, bequeathed $59,000 to the College of Agriculture and Life Sciences Fund for Communication Arts scholarships. According to a recent ruling, income from the estate is to be used to provide scholarships for students who excel in public speaking, radio, and television programs. Rowe owned a fruit and sheep farm in Fuera Bush, Albany County, N. Y. He was also chief reviewing appraiser for the Federal Land Bank.

Outstanding Alumni

Three alumni of the College of Agriculture and Life Sciences at Cornell University have been chosen for inclusion in the 1972 edition of "Outstanding Young Men of America." The three, nominated by the College's Alumni Association, are Charles L. Baldwin '60, Ouaquaga; Charles L. Doyle '59, Akron; and John C. Sterling '59, Trumanburg.

They were chosen for the annual awards volume in recognition of their professional and community leadership. Sponsored by men's civic and service organizations, "Outstanding Young Men of America" honors men between 21 and 35 whose "demonstrated excellence has marked them for future leadership."

Administrators Elected

Three College of Agriculture and Life Sciences administrators have been elected officers of various sections of the National Association of State Universities and Land-Grant Colleges.

In the division of agriculture, Dean W. Keith Kennedy will serve a one-year term as chairman of the Council of Administrative Heads of Agriculture; Prof. Nyle C. Brady, associate dean and director of the Agricultural Experiment Station, is vice-chairman of the Experiment Station section of the association. Prof. Herbert L. Everett, director of resident instruction, will be vice-chairman of the Resident Instruction section in the division of agriculture.

A report made at a recent meeting of the national association indicates the College of Agriculture and Life Sciences ranks third in the nation in enrollment of undergraduates on one campus. In the 1972 fall term, 2,723 students were enrolled. Iowa State University leads the nation with an enrollment of 6,586 students, followed by Ohio State University with 2,752. The University of California has the most students enrolled, 3,522, but they are enrolled on three campuses.

Professor French Retires

Orval C. French has been named professor of agricultural engineering emeritus by Cornell University's Board of Trustees upon his retirement January 31 after 25 years of service. On the staff of the Department of Agricultural Engineering in the College of Agriculture and Life Sciences since 1947, French served as head of the department for 24 years. He came to Cornell as professor and head of the department after 16 years on the faculty of the University of California at Davis. On leave for a special wartime assignment from 1942 to 1945, he took part in the Manhattan Project as research engineer at the University of California's Radiation Laboratory at Berkeley.

In recognition of his professional accomplishments, the American Society of Agricultural Engineers elected French a Fellow in 1964. He served as president of this national organization during 1966-67 and held several other key positions in the Society.
# Facts About the College

## THE STUDENT BODY

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Enrollment Distribution

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New York State College of Agriculture and Life Sciences, a Statutory College of the State University, at Cornell University.
Theory & Practice: Room for Both
ON THE COVER — Students are showing increased interest in more direct exposure to real-life situations in and out of the classroom. This was recently underscored by Columbia University, reporting on a curriculum shake-up designed to combine intellectual ideals with "the growing demand for technical and useful information." The concept is not a new one for the College of Agriculture and Life Sciences, and in this issue of the Countryman the subject of theory and practice in an educational environment is explored. For the record, however, it should be pointed out that the College’s first dean, Isaac P. Roberts, recognized a century ago the need for a balanced approach to learning. He believed students coming to college without practical skills in farming—which in his day was this institution’s major course of study—should be given an opportunity to learn these skills. His concern for the student was eminently practical in itself. Agricultural colleges, he stated, must provide students the means to acquire "enough practical knowledge to save them from being the laughing stock of the unlettered farmer." From this philosophy grew the College’s famous (or infamous, as some might remember it) farm practice requirement. Over the years the requirement was changed and revamped, and today it has all but disappeared from the educational scene. But in view of the current student interest in combining more "technical and useful information" with intellectual problem-solving, perhaps some type of a College-wide practice requirement is once again an idea whose time has come. Or is it?

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Combines Theory With Practice...

Courses Tailored to Career Goals

by KERRY LARSON '74

Agricultural studies at Cornell University certainly have a different image today than when they were introduced 106 years ago. The most recent change was the historic move on July 1, 1971, to a new name, the New York State College of Agriculture and Life Sciences. The reason for the addition of '... and Life Sciences' was a more broadened scope of the College which the old name didn't signify.

'Broadened scope' has several meanings. One is that the College of Agriculture is reaching out to include academically other areas, besides the traditional ones, that touch agriculture and greatly influence its implementation and success. One question might be asked, "How is the College handling this 'broadened scope' concept in terms of a working relationship between the traditional (practical) and current (theoretical) aspects of the college's curriculum?"

Talking with Dr. Earl Brown of the Office of Student Services and Instruction in the College of Agriculture and Life Sciences, we find the College is handling the meshing of practical and theoretical courses by a 'constant review' of the curriculum. According to Dr. Brown, "It's an evolutionary process."

In terms of faculty participation, this means constant review and self-evaluation each semester by the staff members in individual departments. They try to determine the strengths and weaknesses of their departments. Sometimes practical courses are very successful, other times not, so a more theoretical approach is proposed. The converse is often the case also, so more practical approaches are proposed.

This leads directly to the adviser's input to this working relationship between practical and theoretical approaches to studying agriculture. Dr. Brown described a new idea, the 'pivotal approach' as the basis for the adviser's input into this relationship. The pivotal approach suggests that students evaluate themselves at the beginning of their junior year and determine their specialization at Cornell. They may choose to aim for graduate school and concentrate on a theoretical approach for the next two years to prepare themselves. Or, they may decide on a more practical approach with on the job experience, summer training, and practical courses to benefit them most when they go to work after graduation.

Dr. Brown feels choosing one of these paths at a midway point in a four year program can lead to a more successful education in whatever direction the student chooses. The key is getting advisers to put some pressure on the students at this point and to get the students to be honest with themselves.

For example, often a student is interested in going to Veterinary school after graduation, but by his junior year all his records indicate that he'll have a very slim chance of being admitted. Instead of leaving himself with very limited opportunities for work after college, the student can select a related specialization in Animal Science. Then with some summer training and practical courses he can be prepared to get a good job upon graduation.

Another question might be, "How are students contributing to this joining of practical and theoretical approaches in their study of agriculture?" The answer lies in which courses students are selecting and what combinations of courses students are using to get to their educational goals.

The faculty get some feedback from students when scheduling time comes around. Students elect those courses in which they are interested, have heard good things about (i.e. it's very easy), or think they will benefit from. When enrollments for courses increase, this often indicates a new trend or need. In the case of the expanding Natural Resources Department, the College is finding heightened interest in general ecology. Students are indicating an interest in a more general, theoretical approach to ecology and the faculty is responding.

The students are also very capable when it comes to combining courses to benefit them the most. Dr. Brown has faith in the students when they select their educational approaches but feels strongly that they must be
informed of the current opportunities in every field they consider. His pivotal approach encourages students to find out this information before it's too late to change their plans.

The most important aspect about this constant review of the educational approach in the College of Agriculture and Life Sciences is the continuous feedback from sources outside the College that are closely connected with it. Dr. Herbert Everett, Director of Resident Instruction, mentioned the important Council for the N.Y. State College of Agriculture and Life Sciences and the Agricultural Experiment Stations of Cornell. "Council membership represents higher education, state government, mass media, private foundations, medicine, biology, farming, and agriculture science and technology." (C.U. Council Booklet 1972-73). The members in these areas are working in jobs out in the real world and have first hand knowledge and experience of what the opportunities are in their fields. By acting in an advisory capacity, they furnish valuable information to the administration and to the students as well.

Prospective employers are also a good feedback source on what the opportunities are in various fields. Dr. Brown mentioned the expanded efforts of his office in relaying information about jobs from employers to students seeking jobs. If obtained early, this information can help students decide what their chances are in certain areas. They can change some of their courses to help shape their education into a more marketable commodity. Again, some students might pick up a few practical courses while others will realize that a good theoretical background is more important for a job where the company wants to train the new employee entirely and specifically for that job.

Another person interested in helping students make the best choices in their educational approaches is Allen L. Perry, Placement Coordinator in the Office of Student Services and Resident Instruction. Directly involved with student career placement, he hopes to see more emphasis on preplacement programs. He feels a "total package" is essential in helping students determine their educational goals. Mr. Perry believes a combination of early specialization decisions and appropriate job placement will benefit the students the most with their educational goals.

The students, faculty, and administration are all helping to mesh practical and theoretical approaches to studying agriculture at Cornell into a feasible answer for their individual concerns. They are feeling their way under the new concept of broadened scope in the College by contributing and by giving and taking the best out of each approach. The working relationship of practical and theoretical approaches to education at Cornell continues to reflect the concerns of many interested and intelligent people.
Idea to Reality . . .

Research Extends Corn's Range

by ROBERT J. COREY ’74

Through practical application of an old theory the barrier that has long halted the extension of the nation’s corn belt into the chilly Northeast has been removed. Prof. Clarence O. Grogan of the Department of Plant Breeding and Biometrics and research associate, Clifford E. Manchester at the N.Y. State College of Agriculture and Life Sciences, Cornell, recently solved some of the problems involved in the production of an adequate corn crop for New York and other cold-weather areas.

“Because New York’s short growing season and cool temperatures would not allow the development of an adequate corn crop to meet the ever increasing demands of the state’s agricultural industry,” said Professor Grogan, “we began to search for a corn hybrid that would meet the specific needs of this area.” The search yielded three separate hybrids which will be available in time for planting in 1974. The hybrids are called Cornell 110, Cornell 407, and Cornell 565.

According to Professor Grogan, the theory of hybrid development has a long history going back to the early 1900’s. Beginning with a vast quantity of unimproved seeds, early researchers attempted to produce high-yield crops through the careful selection of seed from the best plants in any given year. This method seldom improved crop production and in fact often resulted in a decreased yield because of inbreeding, which causes previously hidden recessive genes to appear, just as inbreeding in humans results in inferior physical and mental characteristics in infants.

“Inbreeding is forced in experimental fields by covering the tassels and silks of the corn plants with small bags before they are mature,” said Mr. Manchester. Experimental crops are then pollinated by hand once fully developed by collecting pollen from the plants and dusting it onto the silks of the same plant. This self-pollination process is continued for several generations. The inbred strains produced by self-pollination show a reduction in size and vigor through about the 5th generation as the recessive genes begin to appear. As each new generation of inbreds is produced, researchers discard plants that prove susceptible to insects, disease, cold, and other environmental factors. Plants that are dwarfed or show other undesirable growth characteristics are also eliminated. The process of developing pure inbreds requires from seven to ten years of work. “From just ten inbred strains produced in this manner,” said Professor Grogan, “we are able to experiment with 45 single-cross hybrids or up to 630 double-cross hybrids when all of the available combinations are considered.”

Hybrids are produced by testing inbred strains for compatibility. By allowing inbreds with desirable characteristics to cross-pollinate, hybrid corn plants result. The testing of hybrids requires an additional three to five years after the development of the original inbreds. This time-consuming process was applied by Professor Grogan and Mr. Manchester to produce the three new high-yield corn hybrids for grain and silage production in northern climates.

Cornell 110 is the result of combining three inbreds. It was selected for use in short-season and high-elevation areas such as those found in St. Lawrence County.

Cornell 565 is also a three-way-cross hybrid resulting from the cross pollination of a single-cross hybrid and an inbred male parent plant. It was chosen for its ability to increase corn production in the relatively long-season areas of New York along Lake Ontario and in the Hudson Valley.

Cornell 407, a high-yield mid-season hybrid, is best suited for areas of central New York. It is the most complicated of the three new hybrids, containing the characteristics of four separate inbreds.

The formula for the new hybrids has been released to the New York Foundation Seed Cooperative. The cooperative will develop the basic inbred seeds and the single-cross hybrids for sale to commercial seed companies later this year. The cooperative does not produce the final hybrid seed itself. It is responsible for increasing the initial inbred stock, and for later certifying that hybrids have been properly produced by the commercial seed companies.

“It is all a never ending process,” said Professor Grogan. “Inbreds are being produced all the time, and we exchange inbreds with other developers in Canada, Nebraska, Michigan, Wisconsin, and many other places.”

Professor Grogan expects that once the new hybrids reach full production, “whether they are used to feed swine or dairy cattle, they should serve to help stabilize the economy in those areas.” Thus, the process of converting theory into the practical may help farmers and housewives alike to remove some of the barriers that nature has placed in the path of human progress.
Practical Courses . . .

Plants, Wildlife, and Welding

by R. J. MARKES '74

Often one hears from students in the College of Agriculture and Life Sciences that their course work seems to have no real bearing on their future careers or individual interests. It seems the problem of too much theory and not enough practice is far reaching, so it is comforting to know that there are still some courses in the Ag College that rely heavily on practice. Three courses bear this out.

Plant Pathology 301, taught by Prof. C. W. Boothroyd, emphasizes practical reasoning on the part of the student, to gain a working knowledge of plants and plant diseases. Professor Boothroyd stresses the need for instructors to gear their presentations and testing to the many levels of student experience in plant diseases.

The lab in P.P. 301 provides the focal point of learning. The students observe actual diseased plants and study the causal agents (plant pathogens), and the effects of the disease. They also learn the newest methods for combating the disease, and how they are applied.

The test, oral exams, and term paper are also geared toward practicality. The individual oral conferences give the instructor leeway in both grading and questioning. The term paper equips the student with a thorough working knowledge of at least one plant disease through an extensive review of the literature.

Natural Resources 411, "Wildlife Management Methods," taught by Prof. James Caslick, exposes the student to methods now used to manage wildlife populations in North America. Professor Caslick's classes study life-history aspects that have a direct bearing upon management methods for major game species. The course work increases the students' knowledge of particular species and their response to management. This knowledge is basic for a career in wildlife biology.

The labs in N.R. 411 deal with such topics as identification, ageing and sexing of wildlife species, analyzing food habits, census techniques, habitats, and field mapping. While there are no term papers, those who wish to undertake special projects are encouraged to do so in N.R. 495, "Research in Wildlife Science." The principles on which management practices are based are emphasized in a prerequisite course.

If students are later employed in wildlife management or research, or go on to graduate school, the knowledge gained in N.R. 411 is invaluable. For those who do not, their knowledge adds to their enjoyment of the outdoors throughout their lives.

Agricultural Engineering 205, taught by Prof. Fred G. Lechner, is perhaps the most practical of the three, as it offers the student a chance to learn the methods involved in welding. The course also exposes the student to the use of drills, drill sharpening, sheet metal work, and pipe-fitting.

The lectures outline the week's work in lab. The methods and the reasoning involved in each aspect of welding are discussed. As engineers, the students must also learn some of the theory behind metal and solder characteristics. In the lab, the student does jobs involving the various welding and drilling skills and techniques.

The knowledge acquired in this course can be applied either professionally or for personal use. Many return to the farm where there is always a need for this type of skill in fix-it jobs. Others use this experience around the house. Furthermore, this experience may lead the student into industrial work.

When asked whether there is room within the College for courses in theory and those dealing with practice the instructors responded that they felt an overriding need for both. Perhaps Professor Caslick put it in focus when he said, "an ideal course would contain both, but this is too seldom accomplished. An alternative is to offer both kinds of courses and trust that students will then seek the best balance for whatever their individual interests or career goals may be."

Operation Hitchhike

The article "More Jobs in Schoharie County" in the January-February Countryman neglected to mention the role of the New York State Division of Employment. Operation Hitchhike would not be possible without the cooperative arrangement and combined efforts of both the New York State Department of Labor, Division of Employment, and Cornell University through Cooperative Extension.
Where Experience is Taught
by LINDA J. STILLMAN '74

Every school has its own special way of conducting its educational programs. Some institutions still believe in the highly structured classroom while others lean toward the open classroom philosophy. The combination of the practical and theoretical teaching systems in the Department of Communication Arts in the College of Agriculture and Life Sciences has proven to be successful for active Communication Arts majors. Cornell University is one of the main land grant institutions in the country whose philosophy towards education is mission-oriented. What does this mean? Professors at Cornell who are hired in the State supported schools and colleges are required to devote their time in three major areas, research, teaching and extension.

The research produces many new discoveries in the form of raw data which becomes incorporated into classroom teaching. Much of the research information is made available to the tax payers. The ultimate mission in the Department of Communication Arts is to merge the use of practical and theoretical forms of teaching. This combination of learning forces is then applied to help the citizens of the state of New York to solve some of their every day problems.

The students in the Department are involved in a three-pronged program. Generally speaking in all departments of the College, theoretical and practical teachings go hand in hand. An even distribution of both kinds of courses is heavily emphasized in the Department of Communication Arts. To major in this field a student is going to study several subjects in both types of courses offered. However one third of all the required subjects are given to the choice of the student. This enables him to strongly slant his studies in the direction he wishes, practical or theoretical.

What are some of these theoretical or practical courses that are offered? Students are provided background information in the theory of human communication, history of the mass media or communication law to suggest a few. On the other hand some courses teach the student how to deliver a speech, write news stories and magazine articles, or how to become a photographer. In fact there is a course related to almost every phase of communications world.

As part of the graduation requirement Communication Arts majors must fulfill a practice requirement during six of the eight semesters they are attending the College. Though many departments in the College have done away with this practice requirement, it is to the advantage of the Communication Arts major that the requirement still exists! By working three hours a week "on the job" receiving practical experience many majors find what line of work they would enjoy on a permanent basis. The actual work uses knowledge learned in the classroom, and makes one aware of the true purpose behind required courses which may seem unimportant. In the real world, lawsuits are continuously grieving new people and it is vital to know one's constitutional rights in such situations.

But the most important reasoning backing this requirement system is based on learning to cope with the outside world in real job placements. Cornell students can obtain training in such areas as radio, television, print media, photography or as research assistants to name a few.

Competition for professional work in the Communications world is very keen. However if a student can provide a future employer with tapes from a radio show or produce magazine articles that have been published, he will certainly have an advantage over the student who spent four years in the classroom. Employers are seeking individuals with experience. This combination is provided by the Department of Communication Arts at Cornell.

What careers do Communication Arts majors go into? In the past few years most majors have entered the print media, radio, public relations and advertising. Recently, seniors have been enrolling in graduate schools to further specialize in their chosen field. Cornell's students are being accepted at such top institutions as Columbia University, University of Missouri, Stanford University and other reputable colleges. Going to graduate school appears to be the trend for at least half of this year's senior class too.

The world of communications has much to offer any ambitious young adult. And Cornell's Department of Communication Arts provides an opportunity for a student to find what specific field he wants to enter.
You get "...Cornell's Alumni Univ".

Offered Variety

...Cornell's Alumni Univ... good people." Both wish to experience the setting is worth the experience. University, families are mer. Built on the 1973 pi August 11...and practice as the environment be explored. trans that is...and the Ith...on man's int...will examin...ally, Alumni educational va...area. Inquire sent to Con...N.Y. 14850.
"It's a fine resort can offer" is the way University is billed. This includes "com-
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probably the biggest plus for those who
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at's basically the idea behind Alumni
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as. On the practical side, such subjects
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these courses will encompass outdoor ses-
field trips around the Cornell campus
Region. While these sessions will focus
on with the environment, other courses
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iversity might also be billed as an ed-
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out this summer's program should be
Alumni University, Day Hall, Ithaca,
An Analysis...

Cranch Report Forecasts Change

by STEVE JACOBS '73

The Cranch Report, named after the survey team's leader, Edward Cranch, dean of the College of Engineering, is an essay on efficiency, documenting what it sees as wasteful and extravagant. The report is a tribute to planning, centralized, and authoritarian. Understandably, this has appeared to upset some students, faculty, and trustees.

Among the report's findings and recommendations:
• Cornell is headed for money troubles
• Cornell's growth has been virtually unplanned
• To solve those money problems, tight planning is necessary
• Increasing enrollment to 17,500 students, while hiking tuition six percent per year, is the way to solve the immediate money troubles
• Cornell's faculty should be frozen at current levels, with quotas established for each faculty rank
• The tenure system should be reviewed and modified
• A new post-tenure Distinguished Professorship should be established
• The University's Administration should intervene more often in individual faculty affairs. Planning should start in Day Hall and radiate downward
• Cornell shouldn't expect help from the government

To a University that had just weathered three years of budget-girdling, the Cranch Report promised an unappetizing sequel. Since no teacher wants Day Hall to supervise his classroom, and no student wants to fight another two thousand for housing and dining, the reaction to the report has been often harsh.

But in between the point-by-point rejection of most of the Cranch recommendations, there was an acceptance of the need for more planning. To think otherwise would be irresponsible, said one academic dean. The value of the Cranch Report, goes the prevailing opinion, is that it will force long-range planning decisions.

The conflict between the need for a balanced budget and the pursuit of academic excellence remains. A group of Cornell officials is trying to make a peace, or at least a temporary compromise. How well they succeed will be seen in May when Cornell's trustees will review a second-generation version of the Cranch Report. This version will draw on the original, comments from the faculty and students, plus position papers assembled by 25 experts on implications of the report's recommendations.

What's likely to emerge will probably contain these points:
• A redefinition of Cornell's role as an educational institution
• An endorsement for planning, using modern management techniques, coupled with a statement that Cornell is very different from any other 200 million dollar corporation
• A recommendation that the University accept 1,000 more students, raising enrollment to 16,500.
• A statement emphasizing Cornell's commitment to middle class students which also recognizes the need for continued tuition increases.
• A scuttling of the Cranch Report's proposal for creating the Distinguished Professorship.

In my opinion, the document will likely shift power to the accountants, at the expense of individual academic departments. Probably not as much as the Cranch Report recommends, nor not as little as the professors desire. Will it be enough to prevent the bad times from getting worse? Time will tell.
An Analysis . . .

Viewpoints Vary on Cranch Report
by MARK B. KOSTRZEWSKI '74

In the wake of major controversy regarding the Cranch Committee’s report on long range planning, distinct forces have crystalized within the University.

Most people agree that the report has justifiably received criticism. However the direction of criticism has varied from one place to the next.

The student body addresses itself to four of the report’s recommendations: a continued increase in student numbers while keeping the faculty constant, a six percent tuition hike, restricted housing construction, and the streamlining of non-academic services.

Their adverse reaction to overcrowding and higher costs is understandable. But it seems to me their reasoning is based on immediate and narrow terms.

A member of the committee, Dean Alfred Kahn of the College of Arts and Sciences, reiterates this view. “Without planning, without thinking, the student body has been increasing four percent a year. The report has in effect said we should cut that to a 21/2 a year. It’s only because we’ve told people that they suddenly open their eyes and say, ‘What are these crazy people doing?'”

It is a misconception to view Cranch in such cut and dry terms. Other factors must be considered. As important as student criticisms are, they tend to miss the boat by ignoring two overriding factors in the report.

To begin with, the administration commissioned Cranch in the midst of seven consecutive deficits, rising costs, and continued budget cuts. With this in mind, the committee tried to demonstrate a general need for better planning. Many of their recommendations were intended to stimulate serious discussion.

Indeed, such has been the case. A majority of the various colleges’ faculties accept the general need for better planning. Dean W. Keith Kennedy of the College of Agriculture and Life Sciences has even endorsed the report in full.

The controversy has arisen over the manner in which the report addresses itself to this general need for planning. In particular, the FCR (Faculty Committee of Representatives) in the Arts and Science College disagrees with the report’s logic. They feel the trade-offs and hard decisions which the report suggest will not insure quality education but rather will destroy it.

The FCR is quick to endorse student objections. They also oppose the removal of tenure and institution of productivity standards. Moreover, the Arts and Science FCR is extremely critical of the report’s tone and the economic analysis which led to its conclusions.

Their criticisms deserve some recognition. The callous, managerial terms of the report do violence to the spirit of the University. And furthermore, the Cranch Committee readily admits that its economic analysis was hastily prepared. In retrospect, the Committee concedes that the suggested policies on tenure and productivity standards would do more harm than good.

But the validity of the FCR’s criticisms, must be qualified. To an extent, the FCR response appears politically and emotionally motivated.

Many people believe the Cranch Report directed itself to the Arts and Science College. Consequently, the FCR has inferred that the administration should look at its own house before criticizing others. Much FCR antagonism towards the Cranch Report also stems from a belief that the Committee was stacked by the administration.

In the final analysis, the FCR’s economic and academic criticisms are probably valid only to the extent that they recognize admitted flaws in the report. Few people argue that a more comprehensive study would not demonstrate a financial crisis. The rejection of present economic realities relies on the foolish conventional wisdoms of past economies.

With this in mind, Dean Kahn emphatically states, “We have not been giving enough conscientious thought to what we are doing.” In other words, if Cornell hopes to continue to do the things universities are supposed to do in the face of financial restraints, then the University must plan more carefully.

Rising costs, inflation, and drastic cuts in public assistance have forced a bittersweet marriage. Educational excellence needs financial support more than ever before.

This reality means that people must think seriously about keeping Cornell a first-rate university. Trade-offs must be considered, and some hard decisions are inevitable.

The Cranch Committee’s recommendations reflected a rough estimate of how this process might be accomplished. And in light of student and faculty criticisms, more serious thought must be given to specific recommendations.

Still, sacrifices must be expected in all quarters. In view of the administration’s positive reaction to the report, the implementation of the Cranch economic-academic trade-offs seems certain.

The administration reasons that tuition hikes, more students, restricted construction, and streamlined services will help ensure financial security without injuring educational quality.

The Cranch Report has advanced this logic to influential sectors of the University. It appears that the administration has established a beachhead for planning Cornell’s economic future. Where we go from here is anyone’s guess but certainly everyone’s concern.
Blacksmiths: Still Hammering

by JAKE JACOBS '74

It was a crisp Friday morning when I passed through the Large Animal Hospital of Cornell University. The hickory flavor of seasoned hay entered my nostrils as horses looked up from their munching to eye my shadowy figure. I was on my way to interview the Cornell blacksmith. Harold Mowers is a mere wisp of a man weighing about 150 pounds.

A flowing conversation, ranging from the practical art of blacksmithing to the smoke-filled classroom technique of professors passed between our lips.

I had a list of questions to ask Harold Mowers but found it unnecessary as the Cornell "Smithy" lit up a Camel and started to talk about horses, horseshoes, and all else concerning the horse culture.

Harold Mowers entered the blacksmith trade for a reason not to be expected. One thinks that people who love to work with their hands and enjoy the smell and feel of horses turn to the craft of "smithing." Harold was a youngster during the Depression and needed a job. His uncle was a farrier and Harold stepped in cleaning the stables and sweeping the manure. He, of course, learned to love the art and the horses and is now a top flight smith with a statewide reputation.

Mr. Mowers states that the art of shoeing requires nimbleness of mind as well as hands. One's judgement is essential in shoeing a particular horse as is the adroitness of the digitals.

Mr. Mowers then told me the fantasy that shoeing horses is a vanishing art. "There have never been as many horses in the world as there are today. The demand for blacksmiths is great and the young smiths today know that if one works hard to perfect his craft, he will make a very comfortable living."

Mr. Mowers trains two blossoming blacksmiths every 16 weeks. He would rather teach one or two novices in the art than ten or twelve at the same time, which occurs in the other 18 farrier schools around the country.

Mr. Mowers says that the most satisfying aspect of smithing is his skillful results with the horseshoes. He loves his own work and his horses.

"You have to love horses and everything about them in order to be a successful blacksmith. And that includes the manure."

Mr. Mowers is glad that he works with his hands for a living, but he points out that the mind also must work. He thinks that young smiths coming into the trade have a better attitude than he did when he first began to dabble in the hearth. "These youngsters know they could have a white collar job in any office, but they chose this craft where they get dirtier than a ditch digger."

They seem to reject the computerized non-personal jobs and find their true salvation in working with their hands."

I left Harold Mowers with one of his two students who had asked him how to trim a particular hoof. He left me, with his Camel butt plunged into the anvil, yelling, "But I can't stand the smell of a cow."

My next stop was Phoenix, New York where Mr. Nielson was training 12 young men in the craft of horseshoeing. These guys ranged from roots in Indiana to homes in the Benzoniahurst section in Brooklyn. As I entered the stable the blacksmith that seemed most assiduous and virile was in the corner. On his anvil was his name. It spelled Hob Weber. He had spent two years at Cortland State University taking liberal arts courses. He told me, "I was not interested in any academia and all I did was sleep all day." His bushy beard bounced as he struck his red hot shoe with many a left-handed thump. He was making gaited shoes this day and was hammering extra hard on his anvil. Sweat poured off his thick black curly facial hairs as he hammered and answered my next question.

"I entered this craft because I love horses, and I feel very earthy and closer to nature when I work with my hands. There is a kind of romanticism involved. I feel like I am a pioneer ready to cultivate the virgin territories of the Old West."

Hob Weber originates from Rosedale, Queens, while his fellow blacksmiths come from a variety of areas. Yet,
"I entered this craft because I love horses and I feel very earthy and closer to nature when I work with my hands. There is a kind of romanticism involved. I feel like I am a pioneer ready to cultivate the virgin territories of the Old West."

Weber's reason for being a blacksmith is very unlike his background.

Hob went on to say, "I feel like Daniel Boone or some other pioneer of that era. There is romanticism involved in the craft of shoeing horses, and this is a major reason why I entered the field." He has spent six weeks at the Phoenix School and looks forward to every new day. He spent six months in Queens eating and watching TV before coming to Phoenix. He grew fat and discontented. Now his arms and wrists bulge with muscle without a trace of fat on his body. Hob and his eleven cohorts work five days a week from eight 'till five.

Mr. Nielson, the master farrier, does a project in the morning, explaining his work while doing it. When he is finished he says, "All right boys, do it, only better." Then the smiths start to work for the rest of the day. They joke and are in very high spirits as they try to emulate the project. The atmosphere is gay and filled with the sound of horseshoes being shaped by the strong thrusts of the smiths.

The last two weeks of the course involve the actual shoeing of live horses by the young smiths. All the farriers look forward to this period for that is when they will be doing the real thing. The ten weeks before is preparation for these moments.

Hob led me to his locker and showed me the shoes he had made already. Forty shoes of all sizes greeted my eyes. He was quite proud of all his work; I can see he has come a long way from his Rosedale home.

Hob Weber is just one of 12 blacksmiths attending this school. Hob does not represent a typical New York City citizen. He has the elfin touch and his work at the anvil bears me out. His shoes are smooth and precise. It seems like the shoes he made would simply flow onto horses' hoofs. Hob Weber left me with a firm handshake and went into the bunkhouse to join his fellow farriers in a beer.

After talking to Mowers and Weber, the practical art of shoeing horses seems a natural way of spending one's working hours. The fulfillment of knowing that you have made a good shoe and the aura of romanticism involved in horseshoeing makes this craft very attractive.

Harold Mowers and Hob Weber made it clear that office jobs, using only one's mind, are not the only way to make a living. After listening to the polished farrier and the young novice smith speak of the craft, it made me wish that nimbleness of hand was instilled in me so I could delve into the craft.
Practical Aspects . . .

A view of practical work by students in the College of Agriculture and Life Sciences.

Students perform varied tasks, from feeding newborn calves; helping prepare for surgery; predicting the weather; surveying the land; milling stock; to recording plant growth.
Dean Roberts:
A Pioneer in Practical Education
by JACKIE DE GROFF '74

In these days of increased interest in building more practical experiences into college work, it is appropriate to remember Isaac Phillips Roberts, first dean of the College of Agriculture and Life Sciences (then known as the New York State School of Agriculture). He believed that students should be given an opportunity to develop worthwhile skills useful in the outside world while they are attending to their intellectual pursuits.

Dean Roberts was born in Seneca County, New York, July 24, 1833, of American-born parents. He was educated in the district school of the town of Varick on the west bank of Cayuga Lake, about opposite the town of Aurora, and at the Seneca Falls Academy. He never attended college but went from East Varick to La Porte, Indiana, where he practiced the trade of carpenter until he was able to buy a farm, and taught school during the winters.

In 1869 he was called to the position of superintendent of the farm and secretary of the Board of Trustees of the Iowa Agricultural College at Ames, and shortly afterwards was made professor of Agriculture. In 1873 he accepted a similar position at Cornell University and a little later was made dean of the Faculty of Agriculture and director of the Experiment Station.

With the passage of the Land Grant Act more than 100 years ago, instruction in agriculture was given a national sanction. Cornell had taught agriculture since 1868, but it wasn't until 1873 when the work was really established by Professor Roberts. He came from the farm with the traditions of farming.

Professor L. H. Bailey said of his colleague, "He stood for agriculture—not for natural science under the name of agriculture nor for some pleasant combination of studies that would satisfy the law. From the first years that I knew him he was a philosopher and a forecaster, always practical, always driving home the point, always with his feet squarely on the ground. He was the real teacher of the small group, preferring the out-of-doors and the barns and the herds to the formal laboratories. I have never known anyone to make such good educational use of an entire farm and its equipment. Unlike many practical men, he did not insist that all science should have immediate application. He saw the educational result. So he gathered about him many specialists, gave them every facility and equipment he could secure, and left them with great freedom."

Today, students at Cornell spend most of their time in classrooms and aren't able to experience the practical field study that Professor Roberts used to instruct his students. Although Roberts believed in classroom instruc-
The New York State College of Agriculture and Life Sciences prepares students for a variety of careers, some of which are not found in other colleges of agriculture. Students planning to begin their careers with a bachelor's degree are encouraged to follow a broad, general program for the first two years to give them an exposure to many subjects. During the last two years they are encouraged to take several applied courses in one or more of over 50 specializations, so they will be prepared to be productive soon after they are hired. Specializations may be grouped into nine major areas, as follows:

**Agricultural Engineering**
- Professional Agricultural Engineering
- Agricultural Technology
- Agricultural Engineering Technology
- Mechanization Teaching

**Animal Sciences**
- General
- Animal Breeding and Physiology
- Animal Nutrition
- Dairy Production
- Livestock Production
- Poultry Science
- Entomology

**Biological Sciences**
- General
- Biochemistry
- Botany
- Ecology and Evolution
- Genetics and Development
- Neurobiology and Behavior
- Physiology and Anatomy

**Education**
- Conservation Education
- Science Teaching
- Vocational Agriculture Teaching

**Economics and Management**
- Agricultural Economics
- Business Management and Marketing
- Farm Management and Finance
- Food Industry Management
- Resource Economics

**Environmental Studies**
- Atmospheric Science
- Environmental Conservation
- Fishery Science
- Forest Science
- Outdoor Recreation
- Soil Science
- Wildlife Science

**Food Science and Microbiology**
- Food Science
- Microbiology

**Plant Science**
- General
- Field Crops
- Floriculture
- Landscape Architecture
- Plant Breeding
- Plant Pathology
- Plant Protection
- Pomology
- Statistics and Biometry
- Vegetable Crops

**Social Science**
- Communication Arts
- Cooperative Extension
- Rural Sociology
Women In Agriculture: Equal Partners?
ON THE COVER — You might think that agriculture would be the last stronghold of male supremacy. Indeed, an inspection of the faculty directory in Roberts Hall, the College’s administrative headquarters, would seem to confirm this view. Of the 347 persons listed, only six are women, an unimpressive 1.7 percent. But on the farm, such is not the case. Women have long had an important role as equal partners, sharing much of the hard work of this enterprise. Farming is still largely a family business and the women play an important part, mixing milking with motherhood, house work with driving a tractor, scrubbing floors with scrubbing out milk tanks. Farm women have, if anything, traditionally been more equal with their men than those in the towns.

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One Woman's Work...

Farming With Frances

by KERRY LARSON '74

Some women are doing what they really want to do these days. For Mrs. Frances W. Ritchie, of Interlaken, New York, this means breeding a beautiful stock of Arabian horses. She handles her own 18 acre farm by herself and has quite a business going. She's a woman in agriculture and wouldn't have it any other way.

How does this compact figure of 5'2" handle Arabian stallions in her breeding business? Why, she handles them like most people handle a pet dog or cat. Mrs. Ritchie, almost always just called Frances, has a real technique with animals. She loves them dearly but can also be firm with them. There are eleven Arabians on her farm plus one boarder and all of them will come to her when called by name. They range in age from one year old foals to almost 22 year old stallions. They are spirited horses and love to race up and down the fields on Frances' farm. The horses are part of Frances' life and she's very proud of it.

Frances Ritchie was born on a farm about two miles from where she lives today near Interlaken. She and her husband bought the farm in 1933 and farmed the land and raised a family. They always had horses on the farm but only to ride and do the heavy pulling. Frances remembers their dream, "was to breed Arabians." They got the chance in 1951.

Frances and her husband drove to Indiana and picked up their first Arabian filly, Bint Hilmi. They were one of the very first people to start breeding Arabians in this Upstate area of New York. Frances learned the business of breeding horses right from the start with her husband.

Their next trip took them all the way to California to pick up a prized stallion named Ankazan. They brought him back to Interlaken and he has been siring beautiful Arabian offspring for the last 19 years. The majority of breeding is done with local horses but there have been some people bringing their horses from Connecticut and Pennsylvania, coming on recommendations by word of mouth alone.

Ankazan sired quite a famous colt named Ibn Ankazan (Son of Ankazan). This offspring has gone on to win the East Coast Western Pleasure Champion in 1971, the Legion of Merit Champion in 1970, the Region VII Reserve Champion Gelding in 1969, and the winner of 21 AHSA ribbons and hundreds of ribbons in halter classes.

In 1967 Frances bought another stallion named Farubi, from Oregon. She did this in response to the many people in the local area searching for another Arabian to breed to their half Arabians. Farubi has sired foals that have gone to Rhode Island, Massachusetts, and all over New York State.

Frances has been handling the business and farm by herself since her husband passed away in 1966. She lives with her sister, Miss Williams, who works as a nurse during the day and helps Frances with some of the chores in her spare time. Asked why she continued raising horses by herself, Frances recalls, "There was
never any question about going on with running the farm and breeding Arabians. It’s my whole life.”

Today she has an 18 acre farm for her horses and rents out another 100 acre farm to a man who grows feed which Frances buys to feed her horses. She gets up at 5:30 a.m. each morning to care for her horses, her 10 cats, and her dog Smokey. She then drives some 20 miles into Ithaca, New York, to work at a sorority called Delta Gamma on the Cornell University campus. Frances loves the girls there and it keeps her in touch with young people, which is important to her. Working five days a week from 8 to noon plus running a farm and breeding horses keeps Frances very busy. The activity suits her well and seems to keep her young.

Most people who meet Frances marvel at her technique with stallions. Dr. Braun from Cornell University gets a real kick out of the way Frances bosses her stallions around and how they mind her, according to Frances. Oftentimes stallions can be high strung and hard to handle, but Frances seems to have hers well under control.

Life is not always perfect when raising horses. Frances remembers the time when one of her favorite mares passed away right after giving birth to a little foal, leaving Frances with an orphan to raise. She promptly took it to Dr. Hillman at the Cornell Veterinary School to get some help. It stayed there for one week and Frances brought it back to the farm, determined to have it live and grow up healthy. She fed it four times a day around the clock to make sure it got enough nourishment. To keep the little foal company she bought a baby goat to stay with it. They grew up together and were great friends. It was such a warming picture to see these two little animals comforting each other in the field.

Today the little foal is two years old and is named Cindy’s Memory in honor of her mother, Cindy. She is still one of Frances’ favorite horses and seems to know this by demanding a lot of attention from Frances.

Frances doesn’t think of herself only as a woman farmer. Rather, she is raising horses and running a farm because it’s always been her way of life and she truly enjoys the outdoors and being close to animals. Frances is doing what really interests her, and that happens to be a successful woman in agriculture today.
Women's Studies At Cornell

by STEPHEN L. SCHAEFER '73

"Women's Studies." What in the world is that, you ask. Is it a new psychology course? Is it some new field of social research? Or is it still another example of women's changing roles on the Cornell campus?

The answer is all of the above. Women's Studies is a new campus-wide program that offers students and faculty the opportunity to study and discuss, quite simply, the subject of women. More specifically, it is an interdisciplinary studies program that relates such diverse fields as history, psychology, and labor relations to today's modern woman. Currently one of the most popular new programs at Cornell, women's studies is still expanding and enjoying much success.

How did it all begin? Let's take a brief look at the development of this unique educational program — "unique" because it is believed to be the first program of its type to be offered at a major coeducational university. It all began just three years ago when Cornell first offered a new interdisciplinary course, Human Development 390: "The Evolution of Female Personality." At the time it was felt that some type of course on women was needed to help explore the roots of the new feminist movement in America. As it turned out, the course generated so much student and faculty interest that there was a subsequent demand for more courses and studies on women. In fact, the interest was so great that in October 1970 a Female Studies Program was established under the auspices of the Center for Research in Education.

The program was still limited and highly experimental in nature, but it continued to grow in popularity. By the fall of 1971, the Female Studies Program began negotiations with the College of Arts and Sciences in order to become a part of the college. But in March 1972, the Female Studies proposal encountered some organizational problems and the request for inclusion was withdrawn. Shortly thereafter, a new group of nine women submitted their own proposal for a Women's Studies Program to the Educational Policy Committee of the Arts College. The program proposal was approved by the EPC and given an operating budget of $21,500 for the 1972-73 academic year. At the same time, Women's Studies was given "quasi-departmental" status, and its continued operation would be subject to review by the EPC in 1976. Now, just one year since its official inception, the program has greatly increased the scope and organization of its curriculum. Women's Studies currently offers eight courses on such diverse topics as "Women at Work," "Feminist Art Studies," "Women in Antiquity," and "The Psychology of Woman."

I spoke to Professor Jennie Farley, program director, and asked her what were the major goals of Women's Studies. "Our general aim is to encourage the development of teaching and research about women for both men and women. In fact, 25% of our enrollment is composed of men." Professor Farley continued, "But I'd say our immediate purpose is to integrate women's material and research with the existing departments at the University."

Professor Farley noted that in many courses actual material on the role of women is very limited or not presented at all. She pointed to an example in the School of Industrial and Labor Relations. 'I teach a course entitled, 'Women at Work.' In the past, most labor courses dealt almost exclusively with figures and research on the male worker. Yet women make up 40% of the labor force, and material on them was not being presented. What I'm trying to do with ILR 467 is to include this material on women in order to present a more complete picture of the American labor force."

It's this concept of integrating women's material within existing departments that has received the major effort of Women's Studies. The program currently sponsors six courses with other departments and offers two independent women's courses. In the fall, Women's Studies hopes to co-sponsor nine new courses, thus further expanding its academic role.

The Women's Studies Program is administered by a nine-member faculty board that makes broad policy decisions as well as specific course recommendations. In addition to Professor Farley, the board members include Alice Cook, professor emeritus, industrial and labor relations; Joan Egner, field representative and associate professor of education in the College of Agriculture and Life Sciences; Harold Feldman, professor of human development and family studies in the College of Human Ecology; Nelly Furman, assistant professor, French; Judith Laws, assistant professor, sociology and psychology; Susan Morgan, assistant professor, English; Mary Beth Norton, assistant professor, history, and Ethel Vatter, professor of consumer economics and public policy.

Like many departments at Cornell, The Women's Studies Program is limited in its scope by the budget it is allocated by the Arts College. "We want a really good program," says Professor Farley, "and it hurts when we have to turn away interested students. Right now, there are 146 students enrolled in the program, but many had to be closed out because of our limited resources." The possibility of outside funding has been suggested as an alternative means of increasing the pro-
gram's working budget. "We're trying hard in all areas," says Professor Farley, "but outside funding is extremely competitive, especially now with the many cutbacks in research grants. It's a fight to get those funds, but we're working on it."

While there have been no major fund sources to date, several smaller contributions have been received. One recent alumna who is just starting a career in social services, mailed in a five dollar contribution. "I think it is so great when we get contributions like this," says Professor Farley, "It just goes to show that there are interested individuals who really want to help us out in some measure. This type of support is so valuable to the program." Another alumna has made contributions to help finance the recent Women's Studies guest lecture series. Guest speakers have included Anna Harrison, professor of chemistry at Mount Holyoke College, sociologist Alice Rossi, and Denise Scott Brown, a prominent architect from California. The general purpose behind the lecture series has been to show what women are doing in many different fields today. Quite often they have shown that there are many types of career opportunities for both men and women in some professions that have traditionally been dominated by one sex.

Professor Farley is highly optimistic about the future of Women's Studies at Cornell. She even speculates that someday Cornell may offer a degree program in Women's Studies — perhaps even on the professional level. While this may be in the distant future, the immediate prospects of the program look bright. "At the end of the first semester we asked students to fill out questionnaires and recommend some new courses that could be offered," Professor Farley smiles. "Would you believe that over 25 new courses were suggested in those questionnaires!" With that type of student interest it is no surprise that the program has been so successful.

Alumni Association Holds Annual Meeting

Over 200 alumni and friends attended the Annual Meeting and Luncheon of the Alumni Association of the College of Agriculture and Life Sciences held on Thursday, March 22 in the Statler Ballroom.

Following the luncheon, Dean W. K. Kennedy reported on College activities and Joseph P. King '36 presented a progress report of the College Fund which has now surpassed the one million dollar goal. Pam Murtaugh '73 and Ray Lanzafame '74, student members of the Fund Advisory Committee spoke to the group about the growing needs for the Fund and about plans to involve students more in the future development of the Fund. Don M. Bay '55, outgoing member of the Executive Committee and past Vice President and President of the Association was presented a plaque for his service to the Association.

In the Secretary's report, it was reported that the Association membership now stands at 1230 members, up over 100 from last year, with 53 of the new members being from the class of 1972.

The following new officers and executive committee members were elected:

President — Charles H. Riley '38, Dewitt
1st Vice President — Clifford F. Luders '38, Elma
2nd Vice President — John J. Sullivan '62, LeRoy
3rd Vice President — Betsy Foster Andersson '68, Salt Point
Secretary — Richard A. Church '64, Dryden
Treasurer — George J. Conneman '52, Ithaca
Executive Committee — Ralph Winsor '57, Harpursville
Floyd Morter, Jr. '52, Canton
Albert Lounsbury '55, Saratoga Springs

Charles H. Riley is group Vice President, Distribution Services for Agway, Inc. in Syracuse.

The Annual Alumni Breakfast is scheduled for Saturday, June 9, at 8:00 a.m. It is tentatively planned to be held at the Noyes Student Center in the University Halls Complex above Stewart Avenue.
Cooperative Extension, which has been an aid to farmers throughout New York State, has long been the domain of men in the agricultural sector. Up to 1972, all ag extension agents were men, so it comes as no surprise that much publicity has followed the appointment of the first female agent.

Kathy Brown, a recent Cornell graduate ('71), now serves as Ag Extension Agent for Allegany County, with her headquarters in Belmont, New York. She is well qualified for the job, having taken a two year degree in Agricultural Science at Alfred, followed by a year at Ohio State, and then one more year at Cornell, where she took her degree in Dairy Science and Journalism.

At the present time, Kathy is trying to meet as many of the people involved in farming in the county as possible. At the same time, she is attempting to gain an understanding of the situation in Allegany County, so that she might know what problems the farmers have, and what course of action she should take to alleviate them. To do this, she has to set up meetings where farmers can come and discuss their particular problems with her and among themselves.

Kathy says that she has not received any friction, and that the reception she gets from farmers indicates that they are willing to accept her as a professional. At no time has the fact that she is a woman hindered her in her work with the farming community.

Miss Brown sees the job of the Ag Extension Agent to be quite simply an arm of Cornell University in the county. In being an arm of Cornell, Kathy tries to help farmers lead a better, more profitable life.

The particular problems she is now working on concern herd health and farm management. She is working closely with the farmers to decide why problems like calf losses are occurring. She also is encouraging the correct use of records for the farmer's business purposes.

Her background in journalism helps her in her task of editing the Farm and Home News, a monthly periodical, in her county. This goes out to the farmers as just another service of her office.

Kathy Brown admits that at first she felt a bit of pressure in being the first woman agent, but only because she drew so much publicity. Not being a publicity hound, she insists she wants no "big ballyhoo" about her appointment.

Now that she is settled in her routine the pressure has subsided, and Kathy says her day hardly seems like work because she has so much fun. She plans to stay in Allegany County for quite some time, but refuses to make any personal commitment to a "long range plan" for her career.

The story of Kathy Brown's appointment as Ag Extension Agent, then, would seem to indicate that a field that has so long ignored women is finally realizing that women can do the job. Kathy Brown is a professional, and if more women of her qualifications take an interest, no doubt we will see more and more women working as ag extension agents.
Old Times on Beebe Lake

by DAVE ELENBAAS '73

Beebe Lake was once the center of much winter activity as these photos show.

Ithaca winters have long been the source of student laments and disc jockeys' late-night tiresome anecdotes. For much of Cornell's history, however, Beebe Lake was the center of winter sports and recreation for students eager to escape the burden of studies, as the photos on these two pages illustrate.

The toboggan slide (a) was located on the south side of the lake. For years a winter fixture, the University discontinued its use when the high cost of maintaining the run and the dangers involved became increasingly obvious. In fact, in the winter season of '39-'40 alone, seven persons suffered fractured vertebrae. One adventurous individual went so far as to go down the run in skates. He luckily escaped serious injury despite being knocked unconscious.

Photo (b) shows students at the turn of the century out for a leisurely skate on Beebe's public rink. Balch Hall is visible in the background of photo (c) taken in 1931, as is the Johnny Parson Club. The Parson Club, located on the present day site of Noyes Lodge, provided a warming spot for tired skaters.

Hockey too had its home on the lake as evidenced by the Big Red skaters in action in the early thirties, (d) and (e).
Toboggan Slide, 1904

Big Red in action, 1935

View from the south, 1931
Affirmative Action in Progress
by KAREN KELLY '73

Affirmative Action is a program concerned with the problems of equal opportunities in organizations using federal funds. The program aims itself toward women and minority groups. Under the Federal Executive Order #11375, colleges and universities are required to take positive steps toward solving the problems of employment discriminations with regard to race, color, or sex. Cornell’s program intends to 1) establish goals and timetables dealing with deficiencies in the hiring, promoting, or salary equalization of female and minority group members; 2) suggest, to the training and development staff, the formation of training programs in all areas of possible campus employment; 3) suggest the formation of agencies for possible child care programs; 4) establish grievance procedures; 5) develop posting of all available jobs within the Cornell community.

President Dale Corson has asked all deans, directors, and department chairmen for their assistance in the Affirmative Action program. President Corson continued to say that these obligations “arise both from law and from our own desire. Affirmative Action is a program to which many of us already have made strong personal commitments. It is up to the University as a whole to follow through.”

An Affirmative Action program has been in existence since 1970. The office, located on the third floor of Day Hall, was established in October 1971. Affirmative Action employs two full-time professionals, one full-time secretary, and one to four part-time work-study students, depending on the current needs of the program. The students, under close supervision, are responsible for collecting data and information along with other tasks which Affirmative Action isn’t able to complete. This exposure also gives students some professional experience.

The Affirmative Action staff has completed some of its intended projects. Three months ago a program began by which all possible job openings, excluding academic level jobs, are posted on bulletin boards and in college departmental offices. These lists are also printed in various university publications.

The jobs, according to Director Ramon Rivera, are open to the general public who can qualify for the job. Mr. Rivera said that anyone applying for these jobs, whether they are part of the Cornell community or not, will receive an equal consideration. However, Rivera did say that in some instances, Cornell members may have an advantage simply because of their familiarity with the local community or the available job.

Affirmative Action has begun recruiting programs in the educational fields. Forms have been passed around the Cornell community inquiring about the possible technical or research skills already on the campus. Available females holding Ph.D.’s were found within the Cornell community. At the present, Rivera said, no new positions have opened in specific areas of the qualifications of these women. There are currently 107 professional ranked females within the University. The number has remained the same since 1970 even though new hiring, retiring, and promotions have brought in new female faces. Some of those answering the inquiry were not interested in changing present jobs or in a professional teaching career.

Since the beginning of the Affirmative Action program specific recruiting of Spanish-speaking Americans, Black Americans, American Indians, Mexican-Americans and women has been undertaken. Outside organizations or committees dealing with these minority groups and women have been given job listings and opportunities available on the Cornell campus. Affirmative Action also deals with individuals as resources, (they currently have a resource of some 400 individuals and organizations), who have knowledge of minority group members or women seeking employment. Example: Black and women’s colleges are contacted by Affirmative Action. A program to develop recruitment by Alumni is also underway.

As far as Affirmative Action’s hope of possible training programs, Mr. Rivera said that his group did not control the funds for such a project. At this moment, the administration has not allocated any additional funds towards training and the budget remains low.

Mr. Rivera said that Affirmative Action’s main purpose

Ramon Rivera, Director of Affirmative Action.
is to point out areas where changes are necessary according to federal statutes. Affirmative Action directs projects for the solutions of equal employment problems.

When I asked Mr. Rivera why the College of Agriculture and Life Sciences seemed to have a shortage of women on the faculty, he replied that the agriculture field, it seemed to him, has been very biased in admitting females into agricultural professions. He felt that women have never been pushed to enter into agriculture and hence the shortage of female talent. However, Mr. Rivera projected that a change will take place in the next two-to-four years as an inflow of women enters agriculture and public pressures open new fields.

Mr. Rivera said that he hoped the Cornell community was aware of the existence of the Affirmative Action Office and its program. Since Affirmative Action can only recommend and direct solutions, the program’s reforms and changes will be felt in direct proportion to the implementation of resources and machinery. It must be remembered that Cornell is quite cosmopolitan. Students, professors, and other academic employees, non-academic employees, local Ithaca community members, and various other groups, as a whole, make up Cornell University. This factor in itself can pace programs. But Affirmative Action is here. Equal employment opportunities through Affirmative Action will begin to open up for women and minority groups within and surrounding the Cornell community.

**Cornell Opens Its Doors**

*by LINDA STILLMAN '74 and KAREN KELLY '73*

**Affirmative Action** has been established at Cornell University. Since the beginning of the organization in 1970 several changes in the atmosphere of the College have taken place. We conducted interviews among women who are employed in the College of Agriculture and Life Sciences to see just exactly what effect the Action group has had on them.

There are presently a number of women working as librarians in Mann Library. Several had never heard of Affirmative Action although it is in the third year at Cornell. Most of them stated they had felt no discrimination when they had applied for the position. There has also been an increase in the number of black women employed in the library. The employees have generally been satisfied with the work and the salary. One librarian said that her salary has doubled since she began work in 1967. However, one must remember that Mann Library is part of a state-supported system whose employees receive regular pay increases. It should be noted that many of the librarians are students working on a part time basis and some of the full-time help do not have college degrees.

Some secretaries employed in the College of Agriculture had heard of the Affirmative Action group through reading material, although they didn’t actually understand the total program. For obvious reasons secretaries do not feel discriminated against when applying for the position, but then women do have an almost complete control of secretarial jobs in this country because of the structure of our society. While they feel that salaries have been a little tight, they also realize that budgets are being kept to a minimum due to the freeze and present financial situation. One stenographer thought this was especially true in clerical employment.

A woman instructor in the college was familiar with the program but saw the situation in a different light. She felt the problem goes right back to kindergarten. Women just have not been geared to prepare their life-styles for a professional career. Qualified women who are attractive are at a disadvantage because many men still believe that a pretty face and intelligence rarely coincide. Many men seem surprised when a woman makes any type of intelligent comment. Another drawback is that women have a tendency to react emotionally in business situations more often than men who have been socialized against such behavior. However, she believes the pendulum has finally begun to swing in the other direction. Current female college graduates have a better chance of gaining a responsible position than ever before.

Unfortunately, educated women are running into the same problems as the men. They are becoming over-qualified for the jobs that are available. Many women believe that Affirmative Action won’t solve any problems immediately but they do see it as a step forward. This society has changes to make before it can throw away the old prejudices about hiring women.

A woman in the professional field said, “You know you have made it when men begin to treat you as an equal!”
Animal Health Is Her Business
by MARC ROSENBERG ’73

To the average Cornell student, the Veterinary College is a conglomeration of buildings located in the farthest reaches of the upper campus, where men in green clothes spend all of their time. However, there is an increasing number of women among those green-clad students.

Dr. Mary C. Smith graduated from the N.Y.S. Veterinary College in May 1972. She is now working as an intern in the large animal ambulatory clinic.

Dr. Smith explained her job as an intern, “I actually have an abnormal position at the Vet College, I don’t do most of the work myself. My position is to take senior students out on call with me, and instruct them, supervise them, help them come to a diagnosis on a case. If they run into any snags while treating the animal, then I help them. During the summer I work by myself, but during the school year it is largely a teaching position.”

The Veterinary College actually has three clinics, one for small animals in addition to the large animal ambulatory clinic and large animal hospital. Small animals like dogs, cats and parakeets, are brought to the former in what is basically a place for treating pets.

The large animal clinic treats many of Tompkins County’s farm animals. The clinic charges farmers a great deal less than a private practicing veterinarian would, and less than the small animal clinic. Says Dr. Smith, “The small animal clinic is more of an economic venture. People would rather spend more money on a pet they consider part of the family, than they would on a cow, who must pay for her keep. We also charge less to get enough patients for the students to learn and work on, and only ask for the cost of the gasoline for our cars, and for the price of the drugs that we use.”

Dr. Smith is the only female intern at the Veterinary College. Four years before she was one of only two women accepted in the Vet. Medicine program at Cornell. This past year 11 women were part of the freshman class. Why the increase?

“I believe it goes back to the old philosophy,” commented Dr. Smith, “that the Cornell Vet. College was mainly for farm animals, and there was the mistaken idea that women could not handle the work, or did not want to work with cows and horses. The contention was: why train someone if that woman wouldn’t use her training when there is such a shortage of veterinarians?”

“But in the more recent years,” she continued, “we have tranquilizers and other drugs to restrain the cows and horses, so strength is no longer an important factor in the profession. Also, today a large percentage of the male graduates go into the small animal practice. There was just sort of a lag phase between the time that they thought they needed men and the time they came around to accepting women to the college.”

The outlook appears even better for women next year. The incoming freshmen class will be based on their qualifications, and not a quota system between men and women as far as applications go. In other words, if 20 percent of the qualified applicants were women then 20 percent of the class would be women.

An intern’s day can be very long. Dr. Smith sometimes works a 12 hour day. She may come into contact with many types of cases. I asked her to describe a “non-routine case.”

“A few days ago we had a prolapsed uterus,” said Dr. Smith, “which means after calving the cow keeps straining until she pushes the uterus inside out and it hangs down to her hocks. It can be a large job to get it pushed back in, but the student who worked on the cow did a good slick job.”

Besides the animals who are treated on the farm, the clinic maintains a number of horses and cattle at the large animal hospital. These are cases that cannot be handled easily at the animal’s residence, some needing constant medical care.

Cases that require immediate surgery are also brought into the clinic. Explained Dr. Smith, “Say I have several emergencies lined up and one of them turns out to be a cow needing a cesarean section to deliver a calf. I don’t have time to put off all my other calls and do the c-section. So, I can get the owner to bring that cow into school for the surgery.”

Dr. Mary Smith might be here for quite a while. Her husband, Dr. Eric N. Smith, does research in physics at Cornell. Commented our lady veterinarian, “We just bought a house in Tompkins County, and might become fairly permanent residents.” The Vet. College is fortunate.
Women in Sports

‘... it’s how you play the game.’

by SCOTT KRONENBERG ’73 and ERIC MUELLER ’73
Profiling Women Applicants

by ROBERT J. COREY '74

Beth is ninth in a high school graduating class of 218. Her father is a lawyer and teaches at a small college in Connecticut. Beth has traveled abroad, has been active in student government and drama club, and has won awards in mathematics and language. She is applying to the N. Y. S. College of Agriculture and Life Sciences at Cornell because she wants to specialize in Marine Biology, hoping someday to take part in research.

Joan is fourth in a high school class of 147. Her father is a construction supervisor in Maryland. Joan makes her own clothes and has held a part-time job for several years, saving nearly three thousand dollars. She is an outstanding student in mathematics and the sciences and is applying to Cornell because she wants to study Agronomy. She hopes someday to own her own farm.

Sitting in the small office complex on the first floor of Roberts Hall, Leonard W. Feddema, Director of Admissions at Cornell's College of Agriculture and Life Sciences, files through a stack of more than 2600 applications for admission. He will accommodate slightly more than 500 new students. Last year 35% of the applications were from women. This year the percentage is even higher.

According to Dr. Feddema, both Beth and Joan are representative of the attitudinal changes that have occurred in recent years among women students.

"The era of the 'liberal education' seems to have passed," says Dr. Feddema. "Women students applying to the College are seeking very specific programs, and the number of women applicants is steadily increasing." Of this year's applicants, 1,593 are male and 1,016 are female as compared to 1,700 males and only 880 females one year ago.

Who will be admitted and on what basis? According to Dr. Feddema, "Admission is based on academic preparation and performance. The sex of the applicant hasn't been taken into consideration since November 1959 when the Board of Trustees of the University voted to allow women students the opportunity to live off-campus. Prior to that time, all of the colleges of the University were allotted a quota of dormitory rooms which placed certain restrictions on the number of women who could be admitted to the college."

Dr. Feddema also said that, "Women applicants have moved into many of the traditionally male areas of study in recent years with perhaps the only exception being Agricultural Engineering. But specific and well defined trends in enrollment are somewhat difficult to discern." He said, "Although there has been a substantial increase in the number of female applicants in such areas as Biological Sciences, Natural Resources, Plant Pathology, Horticulture, and Communication Arts, there have been several quick fluctuations occurring from year to year." These fluctuations seem quite spontaneous. Since the College does not consider the sex of the applicant in admission considerations, it makes no special effort to encourage women applicants when recruiting; thus changes in the number of applicants and their field of study seem to reflect a more basic change in attitude and goals.

Similar fluctuations in normal patterns have been observed by Earl H. Brown, Associate Director of Resident Instruction. According to Dr. Brown, "Of the more than 100 women students expected to graduate this year, only a handful have registered for job interviews." Indeed, figures compiled last year indicate that 39% of the College's women students continued their education in related graduate programs as compared to only 35% of the males, indicating a more determined type of woman student.

Both Dr. Feddema and Dr. Brown feel that it is unrealistic because of the nature of the programs offered, to expect that women will comprise 50% or more of the student applicants in the near future. They do however join in welcoming serious, goal-oriented students like Beth and Joan to the College and feel that women who reflect this type of attitude will continue to play an increasingly important role in agriculture and the life sciences in the coming years.

Dr. Leonard W. Feddema, Director of Admissions at Cornell's College of Agriculture and Life Sciences.
‘Friends’ Recognized by Alumni

The “Friends” of the College of Agriculture and Life Sciences were recognized at the annual meeting of the College’s Alumni Association Thursday, March 22.

The Fund has reached a total of $1,133,563.00. This is due primarily to alumni and friends who have contributed so generously to the College.

The Fund has reached its initial goal of one million dollars. To ensure development of the Fund, to strengthen Alumni relations and to stimulate awareness, interest, involvement and support among Alumni and Friends of the College, plans have been made for permanent operation of the Fund. This way the Fund will be used to help meet the rising costs of education through unique scholarships and to help fund new innovative teaching programs.

Through the use of departmental liaison contacts and a newly created Alumni and Friend Advisory Committee, all Alumni and Friends of the College will be invited to become participants in an institution that for more than 100 years, has contributed greatly to educational excellence and the development of new knowledge for the well-being of mankind.

The Friends program is set up in three categories: Founder Member which is for gifts of $5,000 and up; Charter Member which is for gifts of $3,000; and Associate Member which is for gifts of $1,000 in any one year.

“Friend” John Sullivan, President of Agri-Systems, Inc. of Pavilion, New York, is shown above with Joe King, Chairman of the Fund Advisory Committee and Myron Fuerst, center, Chairman of Special Gifts for the Fund, looking at the Friends Plaque which designates John Sullivan as a Founder Member of the Fund.

The Founder category includes: Myron M. Fuerst, Rhinebeck; Cohn Foundation, Rochester; John S. Dyson, Millbrook; Senator William T. Smith, II, Big Flats; M. P. Catherwood, Ithaca; Mrs. Hollis E. Cornell, Johnsonville; Aaron M. Nadler, Brooklyn; George W. Perkins, Walbridge Farms, Millbrook; John T. Sullivan, Pavilion; Jesse Bontecou, Rally Farms, Millbrook; W. Stephen Middaugh, Posthumously; Robert V. Call, Jr., Batavia; Richard C. Call, Batavia; Mr. and Mrs. Sayre MacLeod, Phelps; Curtice-Burns Foundation, Rochester; Dr. and Mrs. Edward C. Raney, Ithaca; David A. Nagel, Clifton, New Jersey; Professor Robert A. Polson, Ithaca.

The Charter category includes: Roscoe C. Edlund, Kansas City, Missouri; William F. Fuerst, Jr., Ithaca; Morton Adams, Rochester; Harold J. Humphrey, Ardsley-on-Hudson; Robert D. Ladd, Poolesville, Maryland.

The Associate Member Group includes: Albert K. Mitchell, Albert, New Mexico; Professor Robert Foote, Ithaca; Charles Werly, Boston, Massachusetts; A. W. Gibson, Ithaca; Tim Butts, Ithaca; Joe King, Rochester; Ruth Jillson, Auburn; Eastman Kodak, Rochester; N. Y. Lime Association, Inc., Syracuse; John Deere Foundation, Syracuse.

“Friends” Mr. and Mrs. Sayre Macleod of Sayre Farms, Phelps, New York are shown above with Mr. Myron Fuerst, Chairman of Special Gifts for the Fund, being presented with their plaque, indicating that they are “Founder” Members of the College of Agriculture and Life Sciences Fund. The Plaque is now on display in Roberts Hall just outside the Dean’s Office.
How to make a meaningful gift without losing vital income

Many of your Cornell friends wish they could give more generously to the College of Agriculture and Life Sciences Fund. They are loyal to the College, they know it has helped them succeed, and they realize that in these times, private support is more essential than ever before to the progress of the College and the education of deserving young people. But they don't know they can make a meaningful gift without losing income that is vital to them and their families.

There are ways! In fact, you may actually increase your spendable income by giving to the College. Cornell's charitable remainder trusts pay income to you and one beneficiary for the rest of your lives, entitle you to worthwhile tax deductions, and give you the deep personal satisfaction of aiding the College now, during your lifetime.

The amount of income may vary from year to year, or you can elect to be paid a fixed amount each year. The present annual rate is averaging about 6 percent — better than most mutual funds.

Another way you can have a permanent part in the future of the College is by naming it in your will. You may designate a specific use for your bequest — a scholarship or fellowship, for example, or even a professorship in a subject that interests you — or you can leave an unrestricted gift to be used by the College wherever the need and opportunities are greatest.

If you would like more details on these ways of personally strengthening the College of Agriculture and Life Sciences, please fill out the coupon below.
EDITORIAL STAFF: Gary Canter, Joanne Chupp, Robert Corey, Carol Epstein, Joan Gallo, Stephen Jacobs, Karen Liebhaber, Pamela Smith, Anne Rabushka, Steven Raye, Kenneth Richardson, Karen Rollo, William Saltzman, Christopher Stegman, Peter Snyder.

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Cornell Plantations...

A Nice Place to Visit

by STEPHEN SHAUGER, GRAD

The Cornell Plantations invite you to 1,500 acres of open space adjoining the main campus. The areas are just a short walk from campus, are accessible to all, and provide a wealth of natural materials which can be of some benefit to everyone. Special gardens, woodlands, open pastureland and meadow, river frontage, and the spectacular Fall and Cascadilla Creek Gorges are linked by a pleasant trail system easily accessible to anyone interested. If you are looking for solitude and fresh air Cornell Plantations has plenty of both.

Plantations' history is interesting and should you care to know more than what follows check Ralph S. Hosmer's book in Mann Library. As the New York State College of Agriculture assembled a large growing collection of cultivated plants in crop gardens, breeding grounds, plant disease garden, nurseries and other areas the need for consolidation became apparent. By 1914 the idea of a botanical garden and arboretum was accepted as part of the master plan of the College. But as a project it lacked active support for its development; progress was slow, discouragements many. With the help of meager funding from the College and the devoted efforts of many individuals, the Arboretum Committee decided that the Cornell Arboretum would be "a garden of trees, a great, unified park-like area, and a wildlife preserve". The area was to represent desirable native conditions and function as an outdoor laboratory or classroom.

In November 1935 the Cornell Plantations was officially recognized as a University enterprise. As in the past and in the years following the Depression the major obstacle to its development was money. When federal funding was obtained in 1935 through the Civilian Conservation Corps (much like Job Corps of the 60's), the Cornell Arboretum or more inclusively, the Cornell Plantations, got its first major thrust forward. When CCC was established in Ithaca the existing Arboretum Committee and the Department of Buildings and Grounds coordinated their efforts.

A useful management plan emerged which the 200 CCC men followed during the 68 months the camp was in operation. Road construction, stream control, land grading and beautiful bridge and trail projects were completed. This was a beginning and from 1935 on, Cornell Plantations had the support of deans, departments, trustees, and even the Finger Lakes State Park Commission. Specific and extensive plantings and planning occurred during these early years and the efforts can still be seen in 1973; the Cascadilla paths and footbridge as well as the plantings on Comstock Knoll are only two constant reminders of good planning years ago.

Development was slow but steady and with the termination of CCC in 1941 members of the Arboretum Committee as well as University Trustees saw the need to continue and expand the arboretum and botanic garden concept. Zoologists, entomologists, botanists, hydrologists, and many other interested groups on the Cornell staff and elsewhere recognized the important teaching and research functions these adjacent lands would have toward continuation and expansion of what...
is now officially called The Cornell Plantations. Today the gardens, woodlands, gorges, etc. are administered by an appointed 16 member faculty committee plus three emeritus professors who serve as consultants. A group of 50 sponsors (active contributors and friends of things that grow) serves to inform others of the purposes and accomplishments of the organization.

When you decide to put away the books and take a walk in a natural area, try to decide what type of place you would like to visit. Both Cascadilla and Fall Creek Gorges as far west as Treman Triangle are under the jurisdiction of Cornell Plantations. Despite devastation from last year’s floods their natural beauty is unsurpassed; with federal support trails are being rebuilt and reopened to the public. If you should want a walk through the woods, the area north of Martha Van Rensselaer along Forest Home Drive as well as the rhododendron collection on Comstock Knoll and Gymnosperm Slope north of the Dairy Bar are also part of the Plantations. If flowers are your “thing” then you must visit the Mary Rockwell Azalea Garden next to Malott Hall or the Lua A. Minns Garden in front of Plant Science Building. That is only the beginning!

A comprehensive viburnum collection, a nut tree collection, a lilac collection, a representative shrub collection, a hedge collection and a five-acre wildflower garden where the typical flora of the Cayuga Lake Basin can be seen are just a few of the sights along Plantations Road. Plantations Road starts on Forest Home Drive, parallels Tower Road and winds eastward under Judd Falls Road, across Caldwell Road and finally terminates in the Test Garden on Forest Home Drive. The wooded area north of Flat Rock up to the Cornell Golf Course boundary has some beautiful trails while the open spaces off Hanshaw Road called Monkey Run provide solitude and scenery of rare beauty. Use the bridle path east of the Fish Hatchery on Judd Falls Road or tour the Architectural Sculpture Garden and you will still be a visitor in Cornell Plantations.

The list is much longer — do come discover these things for yourself. Stop by the offices at 100 Judd Falls Road and while touring the Robison York State Herb Garden, pick up a descriptive map of the Plantations. Find out what the development plans for the recently acquired 67 acres of pastureland south of Plantations Road are and learn about the special crops being cultivated in the open fields.

After you have done all this or just a part of it, match your observations with the objectives of the Cornell Plantations which are:

- To provide a physical environment at Cornell University rich in natural and horticultural resources by preservation, maintenance and restoration.
- To preserve, maintain and develop these resources in close support of instructional and research programs in the natural sciences.
- To stimulate awareness of the educational and aesthetic value of the environment for the benefit of the Cornell community and of others.

But if you have come to Plantations to “get away from it all”, do just that; have a good time, relax, enjoy the things natural and find your own inspiration in what nature and Cornell Plantations have to offer. A graduating senior once exclaimed, “I never knew all this was here and now there isn’t time to see it all”! Discover Plantations for yourself — it will be a worthwhile experience you will not forget.
The Days of Rural Radio

by MARIO MAZZA '73

"Martha," cries Farmer Ferdinand Hudson from the back porch, "... I wouldn't hang them clothes out to dry right yet."

"Well why in heavens name not! The sun's as hot as a pistol and these clothes'll dry in an hour," she replies, not bothering to turn from her work.

"Dry, hell," says Ferdin, in a muffled roar, striking a match to light his pipe. "Those guys on Weather Round-Up just said it's gonna rain Niagara Falls around here in half 'n' hour."

Without breaking rhythm, Martha begins to rapidly unsnap the wooden clothespins that were to have held her fresh wash.

"Well, why didn't you tell me," she squawks.

At this, Farmer Ferdinand Hudson slowly shakes his bowed head, lets out a little sigh, scratches the back of his head, ponders for a moment, mutters "Women!" to himself and walks back into the house to live happily ever after.

Believe it or not, you've just witnessed a rescue operation. The RRN has saved the day!

Ferdinand and Martha were typical radio listeners, in the late 40's and early 50's to a not-soypical medium - The Rural Radio Network.

So let me issue a familiar invitation: "... Return with us now to those thrilling days of yesteryear . . . ."

The concept of the RRN, as the name immediately implies, was to provide the rural dweller and his family with the type of radio broadcasting that would best serve his specialized needs. Stated simply, the RRN was to be the voice of Agriculture for New York State.

The Ithaca based operation, located originally in the Savings Bank Building on Tioga Street, was conceived and realized financially by the company formerly known as G.L.F., now called Agway. Their enterprising officials were aware of the fact that, at the time, there were some seven million people constituting the population of rural New York State, who did not have one concrete, immediate, all-encompassing link with one another at their disposal. In 1947, therefore, the wheels were set in motion in an effort to coordinate and organize a functional medium that could distribute pertinent, timely, and useful information throughout the vast agricultural regions of the state.

G.L.F. built, bought, and obtained licenses for five FM broadcast stations, strategically located, each 2100 feet above sea level, so as to give maximum coverage statewide. The five original stations comprising the Network (WRRL, Wethersfield; WRRE, Bristol Center; WRRD, DeRuyter; WRRA, Ithaca, and WRRC, Cherry Valley) were set up in such a way that they were unattended satellite stations of a master control located in Ithaca. Specific programming could then be cued-in automatically to each station as the need arose by remote control. This was accomplished through use of "sub-channel" operations. This was the precursor of the modern-day "multiplex" operation which utilizes sub-channels on the standard FM wave. The system was originally designed for the RRN by engineer William Halstead, marking the first time that such a complex had been used in the nation. So, with the technical side completed, the RRN took to the airways.

The type of programming conducted by the network was shown to be preferred by its rural audiences according to surveys of the government and the National Association of Broadcasters. Programming was also based on network personnel knowledge of farm families and rural life. The extra plus that the RRN sported was a superior staff with years of experience in this particular field, people who could execute this type of programming effectively. At the helm were President R. B. Gervan, now with Agway, and vice president and network manager H. S. Brown, now with the Ithaca Urban Renewal Agency. At the controls sat Donald Udey, manager of Engineering, electronic wizard extraordinaire. On down the line they go, these famous names in RRN history: Jack Deal, John Hunter, Tom Humphrey, Bob Child . . . ad infinitum, writers, producers, and announcers dispersing necessary information to a cued-in listening audience.

The programming, like the network itself, was expansive. Whereas, nowadays, the commercial radio station is limited by time, geographic space, and economic drawbacks, programs produced for the RRN were far more intense by comparison. Aimed directly at the specialized rural audience, the network forged ahead full-tilt, making full and excellent use of the unlimited
College specialists contributed broadcast material to rural audiences through the facilities of the small studio once located where Malott Hall now stands.

resource centers available to it. From the facilities of Cornell University and other educational institutions down through various governmental departments, solid program material was compiled, deciphered, and pieced together in a way that offered every listener in the 60,000 square mile region the utmost in complete and accurate information.

"For instance," says H. Stilwell Brown, former vice president and network manager, "one of the principal things that we provided to the farmers of the state and to the urban populace as well was a very competent weather forecasting service. This system was actually locked in with the United States Weather Bureau and with the state weather office in Albany. It wasn't until we initiated this service that farmers had any real valuable weather information of an in-depth nature, rather than the brief reports that are offered normally on radio stations."

This development says Brown, eventually led to what came to be known as the RRN Weather Round-Up. Four times each day weather reports of local conditions were broadcast from reporting stations of the RRN. These came at 6:25 and 7:15 a.m., and at 12:15 and 6:15 p.m. Also, as an extra added attraction the 6:25 morning weather cast would feature such information as early morning fruit spray methods, advice on maple sugar and sap runs, planting and harvesting techniques, and so on, at regular periods, according to season. Prior to the organization of the RRN, no statewide network existed for broadcasting direct local reports on weather conditions followed by the official forecasts. The plan, then, was for the stations to broadcast these reports from the west to the eastern part of the state, the direction in which weather usually moves. This allowed farmers to be alerted ahead of time as to what the weather conditions would be in their respective areas for the day, and to plan their work accordingly.

When the idea of starting the network was originally proposed it was with the intent of being used as a guideline service to all farm families. It was decided at the

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### Line-up of Stations in the Rural Radio Network

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<tr>
<th>AM STATIONS</th>
<th>FM STATIONS</th>
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<tr>
<td>WHLD</td>
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outset that one of the most important services that the network could supply would be a more complete and accurate weather summary. The RRN responded with staff meteorologists on duty, computing conditions from anemometers, a device to find the speed of the wind, barometers for air pressure readings, and thermometers and rain gauges. Engineers on the staff also studied cloud formations, sun and visibility information, and related these data to the agricultural picture. Obviously, programs such as these could not go unnoticed. The Weather Round-Up became the most listened to program across rural New York State in a very short time. So great was the response that soon AM stations sought permission to pick up the RRN weather feed for transmission over their airwaves. This led to the eventual expansion of the network through the participation of newly affiliated stations, both AM and FM. Thus, in the early 1950’s the RRN had access to the second largest radio market in the entire nation, placing only behind New York City.

Since the network was composed of commercial stations, sponsors were needed to keep the operations economically feasible. RRN proposed a new concept in regional advertising that quickly gained acceptance by potential sponsors. Advertisers on the network stood to profit in many ways: wide coverage throughout the state; strong promotional backing by the RRN and its affiliates; exceptional public response to services that were highly valued; and an urban audience added as a bonus. The RRN, then proved to be the ideal vehicle for the rural advertising message. It was no wonder that large, well-known sponsors, some of the biggest names in agribusiness and industry, were attracted to this powerful medium.

To what other forms of programming did the RRN lend itself besides detailed weather forecasts? Here are a few:

**News:** General new coverage, but with definite emphasis on news of an agricultural nature. The RRN had at its disposal the resources of the leading news gathering services of the nation.

**Markets:** Stock market reports, egg market prices, fruit market prices and surveys, and livestock market dealings; the latter broadcast live from the Empire Livestock Company at Caledonia.

**Women’s Programming:** The rural homemaker spent more time on homemaking activity than the average urban housewife. Consequently, she was looked upon as a “partner” in her husband’s business, so programming, such as ideas on food preparation, were slanted in her direction.

**Children’s Programs:** All three age groups, pre-school, pre-teen, and teen-age were covered by the RRN. Handling this programming was a full-time youth director and four qualified staff members, producing six shows daily.

**Entertainment:** Music, comedy, drama. These are some

of the people who were involved: Jack Goodman, onetime pianist with Paul Whiteman, played a quarter-hour of music favorites daily. Gordon Myers, whose full baritone solos filled RRN listeners’ ears each Sunday at 2:45 p.m. There were also those classical music relays from WZXR-FM in New York City. And do you remember “The Sportsman’s Report,” “RFD Round-Up,” or “The Breakfast Table?”

**Instructional Programs:** Guests from Cornell and other academic communities presented lectures on the latest technological trends sweeping the agricultural world. All this and more were found packed into a daily broadcast on the RRN. From 6 a.m. to 11 p.m. daily rural audiences were provided with everything they needed and wanted, all emanating from the Rural Radio Network.

Now, the RRN lives no more. It is gone. Yet memories linger. The reason for its demise was simple. The network lived by FM. As radio sales personnel woefully attest, FM air time, then and even now, is painful to sell on such a sizable and consistent level. Thus, coupling the difficulty in economics with the emergence of a great number of AM broadcast stations into the public ear, the owners felt it necessary to sell their holdings. RRN had served its loyal audience well for almost a decade and now the job was done. The first new owners, Ivy Broadcasting Company gave the operation quite a facelift. The Weather Round-Up was continued for a few years, but it was eventually phased out. Ivy then made pacts with what is now known as the Christian Broadcasting Network, or CBN, which deals largely with religious programming.

So it came to pass that the RRN, which came into being roaring its cries through a series of electronic lungs far and wide across parts of Pennsylvania and New Jersey, through the fertile Connecticut River Valley of New England, and over the New York Milkshed, went out of earshot of the widely scattered rural audiences that once gave it their full and complete attention. Newer and more advanced electronic marvels have come along to take its place. Yet among those who recall its authoritative voice, there will never again be anything like the Rural Radio Network.
Empire Farm Days, held for the second time this summer, is becoming the agricultural showplace of the Northeast. To date, approximately 150,000 people have attended the annual event at the College's Animal Science Teaching and Research Center near Dryden, N.Y.

Attractiuns included farm machinery demonstrations, new, earlier, and more compact varieties of vegetables, opportunities to talk about admission to college, free milk, and a special program for women.

The event is sponsored by the Empire State Potato Club and hosted by the N.Y. State College of Agriculture and Life Sciences, Cornell University, at the College's Center on state route 38, south of Dryden.

The latest field, chemical, feed, fertilizer, feed processing and storage equipment were displayed by nearly 200 exhibitors and much of the equipment was demonstrated at various times. Daily demonstrations were held of plowing, stone removal, and harvesting of cabbage, hay, and corn.

Some 500 cows and young stock are housed in the five barns at the center and tour guides explained research projects being carried out there.

Alfalfa, clover, Birdsfoot trefoil, crownvetch, corn, and soybeans were planted at the Farm Days site so visitors could compare various varieties. Another area was set aside to demonstrate control of soil erosion with plant materials, and the use of mulching materials.

A vegetable garden showed early maturing varieties of corn and tomatoes, and dwarf cucumber plants and bush types of squash that require less space. The new Hudson variety of potato, developed by Cornell plant breeders, had been planted along with older varieties to show the increased production of the new variety.

Illustrated talks, a film on "Opportunities in Agriculture and Life Sciences," and for the women, a fashion show and a demonstration on cooking with wine were among the daily features.
Research Improves Sport Fishing

by GERALD GUNKEL '73

Beyond Cayuga's waters in the lake plain area of New York is one of the most productive walleye lakes in North America. Shallow and rich in nutrients, Oneida Lake supports over a million man hours of fishing, and yields a quarter of a million walleyes annually. Located on the shore of Oneida Lake is the Cornell University Biological Field Station which has served as a base for fisheries studies by the Department of Natural Resources since 1957. In cooperation with the New York State Department of Environmental Conservation and the U.S. Bureau of Sport Fisheries and Wildlife, every aspect of the walleye's life history from the egg to the adult stage has been subjected to study. The walleye pike is a sport fish, and one of New York States most popular food and game fish.

According to Dr. Forney, project leader, "An in-depth study of a 'good' walleye population as the one in Oneida is the first step in developing management techniques for less successful lakes. The walleye in Oneida Lake has been studied by following each year's hatch of walleyes through the egg, fry, fingerling and adult stages." Dr. Forney states that "By following the hatch from the egg to the adult stage we can compare survival of walleyes at various periods of time during its life with factors that might affect survival such as temperature, weather, food and the numbers of other fish."

In a typical year walleyes spawn from 10 to 17 billion eggs, but few survive to hatching and only 5 to 10 million fry are alive eight to ten days after hatching. Fry, which are about ½ inch long at hatching, grow to a length of four inches by midsummer. By this time fewer than two million survivors of the original ten to seventeen eggs are left. As few as 20,000 or as many as 400,000 of these four inch fingerlings present in late summer may survive to reach catchable size three to four years after hatching.

The two factors which are important in determining the number which survive are the size of the adult walleye population and the amount of forage available to the adult walleye. According to Dr. Forney cannibalism during the fall and winter controls the number of young walleye that reach adult size. The adult walleye sometimes eat their own young and the number which they eat depends on the amount of forage available. Young perch are the most abundant forage fish for the adult walleye. Dr. Forney and his associates have found this close correlation between the survival of the young walleye and the abundance of perch. In years when young perch are abundant large numbers of the four inch fingerling walleyes survive through the fall and winter months to reach catchable size. Perch act as a buffer reducing cannibalism on young walleyes. One of Dr. Forney's studies is looking at ways to maximize the production of the young perch which serve as forage for the adult walleye. An increase in production of young perch would increase the chances for survival of the young walleye as well as the growth of the older walleye.

Nature has provided a balance between the walleye and the perch. An in-depth study of the walleye perch relationships can lead to a better understanding of natural systems. Essentially the walleye consumes practically all of the young perch that are produced each year, and only enough young perch survive the first year to replenish the stock. The controlling factors in this balanced food chain are that the walleye adjusts its population to

Tools of the trade used by fishery biologists include equipment to determine water temperatures at depths where fish feed and congregate.
Walleye research involves direct examination of specimens to gather data on feeding habits and to check growth rates.

the amount of forage available. If perch are scarce then the number of young walleyes are reduced by cannibalism. If the perch becomes more abundant then the wall-eye eats fewer of his young and allows more young walleye to survive. This, then, in future years increases the predation of the perch. The forage abundance is what determines the growth of the walleye. The more forage fish available to the walleye, the more walleye available for the anglers. The factors that regulate forage production and its consumption by the walleye is the most important aspect of a management program.

Interrelationships between the walleye and the perch show us the ongoing balance of predator prey relationships in nature. By studying these relationships of interactions of a dynamic energy system, such as this balanced food chain, new predictions will be made as to the consequences of stocking, harvesting and the changes of the environment on the fisheries, which in turn will affect recreational fishing greatly. Only through an understanding of the interactions of animal life such as the walleye can man really start to manage the earth and be a steward of the environment.

Cornell biologists are probing the depths of Oneida Lake for clues to walleye production. Studies include interrelationships with other species and the total environment.
A new multi-phase career development program at the N.Y. State College of Agriculture and Life Sciences, Cornell University, promises to aid students in developing a successful, satisfying career by providing both career information and opportunities for field experience.

The four-phase career development program offered by the Office of Student Services at the College includes career exploration, work experience, career placement and alumni services.

Because many students have no clear idea or direction with regard to career plans, Placement Counselor Allen W. Perry feels that, "Educational institutions have an obligation to provide guidance and resource information." Thus, the new program offers a series of steps to build successful careers with an emphasis on early planning.

Beginning in the freshman and sophomore years with career exploration using the career library, guides, company literature and counseling services, students are first encouraged to select a broad but definite career goal.

The second step offers work experience. A co-operative career development program, summer intern programs, part-time and summer job placement programs provide employers with an opportunity to help in the training and education of interested students.

This phase also offers specialized programs to help students gain the types and amounts of experience they desire. For example, a specialized program may include farm practice classes, including instruction in basic farm techniques and placement assistance for students seeking farm experience.

Phase three is an organized effort to get employers and applicants together including the publication of job opportunity listings and on-campus recruitment. This year more than 40 companies were at the College to provide information about their industry, their company and summer and career opportunities.

Each month approximately 70 to 75 new listings of job opportunities are published including career opportunities with such diverse organizations as Abbott Laboratories, Agway, N.Y.S. Electric and Gas, Scott Paper, and others.

The fourth and final phase of the program is alumni service which makes counseling and other resources available to alumni throughout their careers.

Designed to supplement the academic programs of the College, the multi-phase career development program is expected to assist career oriented students in making a smooth transition from the classroom to the world of work.
When the Sun Shines... 

Relax and Enjoy

Cornell's beautiful campus is at its best when the sun shines. But so fleeting are its full, bright rays in the Ithaca area during the long school year that a whole day of sunshine is a special occasion. Such precious hours are usually marked simply by relaxing and enjoying one's surroundings. Make the most of these rare days when you can. Stroll the campus and you will probably encounter scenes similar to those recorded here by Countryman photographer Steve Haviland '74. During his recent tour he found the warmth and brightness a time to move serious discussions outdoors, to loll in the soft grass and study cloud patterns, to frolic with your pet, and a time to impress your parents with scenic wonders. So next time that fine day comes along, plan to put away your cares and troubles. You need not go far to find your place in the sun.
Countryman Students
Share Guldin Awards

The winners of the fall 1972 Guldin Awards for outstanding articles published in the "Cornell Countryman" have been announced by director H. L. Everett of the N.Y. State College of Agriculture and Life Sciences. They are:

- Susan Sorozan '73, 3rd prize, for "There's a Spider in that Box!," November 1972 issue.

Honorable mention went to:
- Nancy B. Cole '71, for "Campus Elms: A Losing Battle?," October 1972 issue.

The Guldin Awards are presented twice each year in recognition of journalistic excellence for the best original articles or stories, written by students in the College of Agriculture and Life Sciences or the N.Y. State College of Human Ecology and published in the Cornelf Countryman.

The awards are $75 for first place, $50 for second place, $25 for third place, $15 for first honorable mention and $10 for second honorable mention.

The Paul R. Guldin Memorial Endowment, established in memory of Mr. Guldin '12, provides funds for the awards, which are intended to encourage undergraduates to become interested and active in the development of adequate rural leadership.

Weather Forecasters Vie For Free Lunch

A free lunch at the expense of the instructor is the prize for students entering the annual weather forecasting contest held in the Division of Atmospheric Sciences at the College of Agriculture and Life Sciences.

The contest, held in conjunction with a course in meteorological communications in the Department of Agronomy, pits the forecasting skills of Douglas A. Paine, assistant professor, against those of his students in a game of synoptic-dynamic meteorology.

The meteorological communications course, out of which the semester long contest has grown, is designed to acquaint students with facsimile, teletype and satellite receiving equipment used in weather forecasting.

Now in its third semester, the contest requires students to accurately predict deviations from the normal in temperature and amounts of melted precipitation over 24, 48, and 72 hour periods throughout the semester.

About 20 students compete each semester, although the contest is open to anyone, and those who score highest are always qualified meteorology students.

In his most challenging semester of the three semester contest, Paine purchased a total of three lunches.

Ag Fund

Summary of Gifts to the College of Agriculture and Life Sciences since January 1, 1973.

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
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<td>Corporations have contributed</td>
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</tr>
<tr>
<td>TOTAL</td>
<td>$131,749.96</td>
</tr>
</tbody>
</table>

The Fund is now working for the College. Already... The Fund has been instrumental in-
- Providing scholarship aid for 31 undergraduates.
- Supporting innovative experimental teaching programs in Education, Food Science, Landscape Architecture, and Agricultural Engineering.
- Aiding the Rural Sociology department's Special Field Study Program in Ecuador.
- Implementing a special Agricultural Intern Program for students having no farm background.
- Enrolling 20 students in a Cooperative Farm Finance Program.
- Expanding student participation in marine sciences study at the Shoals Marine Laboratory.
- Facilitating a gift of Santa Gertrudis cattle to the Animal Science department from the Chaperoosa and Winrock ranches.

PICTURE CREDITS

Pages 3, 4 — Sol Goldberg; pages 5, 7, 8, 9, 12, 16 — Dept. of Communication Arts; page 13 — Steve Haviland; pages 10, 11 — Douglass Payne.
New Associate Dean

James W. Spencer has been appointed associate dean of the New York State College of Agriculture and Life Sciences at Cornell.

Spencer’s appointment was effective July 1. He succeeds Nyle C. Brady, who became the director of the International Rice Research Institute in the Philippines.

Spencer was appointed vice director of Cooperative Extension on Aug. 1, 1970, and had served as acting director since October, 1972. He has been a member of the Cornell faculty since 1951.

Prof. Dimock Honored

Cornell University will honor the late Prof. A. Watson Dimock for his service to the University and contributions to the science of plant pathology by naming a bioclimatic laboratory in his honor.

Ceremonies marking the naming of the research facility as the A. Watson Dimock Controlled Environment Laboratory will be held on Nov. 15. Friends, associates, former students, and representatives of the ornamentals industry are expected to gather here to pay tribute to him.

The dedication will coincide with presentation of the first Dimock Lecture — a public lecture series that will bring an outstanding plant pathologist to campus each year.

A faculty member of the College’s Department of Plant Pathology for 34 years, Dimock played the key role in designing growth chambers in which critical environmental conditions such as light, day length, humidity, and temperature can be manipulated. His pioneering work led to the popular use of such bioclimatic chambers as a vital research tool in the nation today.

College Leaves Increase

After years of interest in burgeoning enrollment figures, College of Agriculture and Life Sciences’ administrators are now turning their attention to statistics indicating substantial increases in the number of leaves of absence from the College.

Figures for the 1972-73 academic year show an increase of nearly 30 per cent over the past two years, up from 122 in 1970-71 to 174 this year.

Financial and personal reasons are those most often given by students applying for leaves. Yet, the increase comes at a time when pressure to stay in school has eased with an end to the draft.

According to Donald C. Burgett, Registrar of the College, “There is no way to be certain that the end of the draft is responsible for the increase in leave requests. But students seem to be taking this opportunity to pause and reevaluate their goals in life.”

“Whatever the reason for the increase,” said Burgett, “students will face an additional problem when returning to the College. Because space is limited, returning students will be accepted on a first-come-first-served basis.”

Market Administrator

Thomas A. Wilson has been appointed market administrator of the New York-New Jersey Milk Marketing Area. He succeeds Dr. Anson J. Pollard who has retired.

He was named jointly by the Agricultural Marketing Service, United States Department of Agriculture; the New York State Department of Agriculture and Markets and the New Jersey Division of Dairy Industry.

Wilson’s interest in the dairy industry stemmed from working on his parents’ dairy farm in Ohio. He was graduated in 1955 with a B.S. degree in Dairy Technology and was awarded the Master of Science in Agricultural Economics in March 1957, both from Ohio State University. Presently he is completing the requirements for a doctorate degree here at Cornell.

Open House

On Saturday, November 17, the College of Agriculture and Life Sciences and the College Alumni Association will co-sponsor an Open House for high school students.

The program will begin at 9:30 a.m. and will feature tours of college facilities, information about admissions to the college, academic programs and career opportunities, and a student panel concerning student life on campus.

Alumni assistance is needed in locating good prospective students and in transporting them to campus. For further information contact Charles H. Riley, Alumni Association president at 333 Butternut Drive, DeWitt, New York 13214 (315-477-6351) or Richard Church, Alumni Association secretary, 195 Roberts Hall, Ithaca, New York 14850 (607-256-2036).
NEVER HAVE SO MANY BEEN SO DEPENDENT UPON SO FEW

Although scientific, commercialized agriculture is the rule in developed countries and an abundant food supply the normal expectation, there are countries where three-fourths of the labor force is engaged in farming but unable to provide sufficient food. (Less than 5 percent of the U. S. labor force is on farms; only about 2 percent in New York.) And even in the United States people are reminded by such things as corn blight or droughts or floods that abundant food cannot be taken for granted.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Farms</th>
<th>Average size of farms (acres)</th>
<th>Land in farms (acres)</th>
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<td>1955</td>
<td>104,000</td>
<td>150</td>
<td>15,600,000</td>
</tr>
<tr>
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<td>88,000</td>
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<td>71,000</td>
<td>183</td>
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</tr>
<tr>
<td>1970</td>
<td>58,000</td>
<td>202</td>
<td>11,700,000</td>
</tr>
<tr>
<td>1972</td>
<td>56,000</td>
<td>204</td>
<td>11,400,000</td>
</tr>
</tbody>
</table>

In a world where population continues to grow rapidly, the production and distribution of an adequate food supply is and will continue to be of major importance. Man’s progress in his ability to provide food has resulted largely from his discovery and application of science and technology much of which was unknown as recently as a half century ago. Nowhere has the application of science and technology been so effective in providing an abundant supply of quality food as in the United States.

Today the food and agriculture industry is no longer synonymous with farming. Industry provides many inputs such as fertilizer, farm machinery, petroleum and electricity which farmers use in their production. And farmers do not often sell to consumers but rely on a distribution system to perform the marketing function. The industry then includes input supply, farming, food processing and manufacture, wholesaling and storage, retailing, and food preparation for consumption outside the home.

This food and agriculture industry generates nearly $6 billion of value added in New York annually and as such is the State’s largest and most important industry. It is a system in which the various parts function as specialized units. Each part depends on all the others. Weakness in one sector of the industry will have important effects on other sectors. A strong, smoothly functioning food and agriculture industry is important to the welfare of all consumers in the State, as well as to more than 500,000 people who are employed in it.

From NEW YORK AGRICULTURE - WHO NEEDS IT? This publication gives many compelling reasons why agriculture is important to everyone. For your free copy write: Mailing Room, Bldg. 7 Research Park, Cornell University, Ithaca, N.Y. 14850

New York State College of Agriculture and Life Sciences, a Statutory College of the State University, at Cornell University.
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EDITORIAL STAFF: Gary Canter, Robert Corey, Carol Epstein, Joan Gallo, Stephen Jacobs, Karen Liebhaber, Pam Smith, Kenneth Richardson, Karen Rollo, Christopher Stegman, Peter Snyder.

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Battle For The Elms

by GARY CANTER ’74

The future of Cornell’s 150-plus remaining elm trees may be dim, but those people involved with trying to save them cannot be accused of giving up. Victims of two deadly diseases, Dutch elm disease and phloem necrosis, these venerable shade trees are in the throes of a major epidemic which has been growing in intensity since the mid-1950s. The disappearance of several popular elms this past fall and summer is an indication of the rapidity at which this epidemic is killing off the trees.

Contrary to the public outcry which arises when these conspicuous trees are felled, the removal work is part of a well thought out plan to prolong the lives of the still-healthy elm population at Cornell. No tree is cut down unless it is “hopelessly gone” and there is no hope for saving it. Moreover, by cutting down and disposing of these dead and dying elms, a process referred to as “sanitation”, the possibility of the disease spreading to healthy trees by way of insect vectors is reduced.

Two Cornell staff members who are very much involved in the elm situation are Prof. Wayne A. Sinclair, a plant pathologist, and Mr. Richard Pendleton, an extension specialist in the Chemicals-Pesticides program. Both are involved in a “policing project” against the disease, the major aim of which is to spot infected trees as soon as possible, and formulate courses of action.

Early each spring and again during the fall, a tour of the campus’ elms is made by these two men and other specialists. Symptoms of both diseases are looked for. Indications of Dutch elm disease (DED) depend on the time of year. In early summer there may be seen wilting or shriveling of leaves and small twigs. At this time of the year the disease can progress rapidly, often killing the tree within two weeks. If the disease strikes in mid or late summer, it generally remains in one section of the tree such as a few twigs or limbs, and is apparent by the leaves in that area curling and/or turning yellow before falling. Trees infected at this time of the year will probably die during the winter or the next growing season.

Internal symptoms of DED can be seen in the outer layer of wood by peeling off the bark. Instead of the smooth cream color of a healthy tree, the wood will be streaked or uniformly discolored brown or black.

DED is caused by a fungus which thrives in the wood of dying or recently dead elms. In addition to killing the tree, the fungus remains and continues to grow in the outer wood and bark of the tree. It is carried to healthy trees by two species of insects known as elm bark beetles.

It is therefore an essential precaution when attempting to arrest the spread of DED to destroy all elm wood which is weak or recently dead, regardless of the cause of death, so that it cannot be used as breeding grounds by bark beetles.

Phloem necrosis is as deadly a disease as DED. Very little is known about ways to combat it, which makes it all the more troublesome. It is a systemic disease characterized by death of phloem in roots, trunk and branches. The inner surface of the bark goes from a healthy cream color to a yellowish or butterscotch appearance, then turns dark brown when dead. The cambial region and thus the surface of the wood may also show discoloration of this type, but the color does not extend more than about a millimeter into the wood. If both the wood and the phloem of a tree are conspicuously discolored, it may have phloem necrosis and DED.

Another early sign of phloem necrosis is the production of oil of wintergreen by infected phloem. This distinctive odor will be detected only in phloem dying of the disease.

This elm tree in front of Caldwell Hall received pruning and benomyl injections when DED was detected in it. The tree shows no signs of the disease now.
An elm tree is injected with benomyl, a fungicide, in the hopes of deterring the DED which has been detected.

External evidence of phloem necrosis is not visible in the disease's early stages. Trees infected in the spring usually do not show symptoms in their leaves until mid-July to September. These include yellowing, wilting, and premature casting of the leaves. In most cases all of the tree's leaves will be thus affected, although occasionally one section of the tree will be affected first. Once these symptoms have appeared, and are joined by discolored phloem and odor of oil of wintergreen, the tree is in advanced stages of phloem necrosis disease.

Besides the scouting tours in the spring and fall, frequent informal checks for the signs of disease are made as religiously as possible, although to do a completely thorough job would require more personnel and energy than is available.

The spring tour of elms on campus coincides with the June period when new symptoms of DED become visible. When a tree is identified as diseased, its condition is evaluated concerning the extent of the damage already done. If the tree is infected with phloem necrosis (for which there is no possible cure yet developed), or if it has DED and is judged to have no chance of survival, it is designated to be removed and the contractor who does Cornell's work is summoned. Trees of this type are cut down as soon as possible.

If the DED is confined to only a portion of the tree, usually an outermost extremity, there are methods which are employed to try and save the tree. First, the unhealthy portion is pruned away back to the trunk, a sort of amputation. This will hopefully prevent the disease from spreading. The process which removes and destroys unhealthy or dead breeding wood is called sanitation, and is considered to be an effective deterrent to the spread of DED if infected trees are detected at an early stage and treated promptly.

The next thing due to a tree deemed savable is a unique injection technique being tried at Cornell and other research institutions. Benomyl, a fungicide toxic to the DED pathogen, is pumped into the tree's water transporting vessels through a series of holes drilled into the trunk. The pesticide has been registered for use in combatting DED, but the Cornell process is experimental because it has not yet been approved. Benomyl remains in the tree for a long period of time, and it is hoped that the injections will prevent the spread of DED fungus from small branches into larger branches and trunks.

The injection treatment takes about 45 minutes to an hour. Once completed the holes are plugged up with corks and the tree is checked periodically for additional symptoms. If no further sign of the disease is seen, the elm is left on its own. If the symptoms reappear, the tree is evaluated once more and may again be pruned. If efforts appear ineffective, the tree is cut down.

(continued on page 14)
Why does the University want to replace Roberts Hall and the other quaint old buildings which form the Ag quad?

Why should the turn-of-the-century architectural style of the quadrangle be completely modernized?

Dr. George C. Kent, Coordinator of Planning and Development for the College of Agriculture and Life Sciences recently answered these questions which have been puzzling many Cornellians.

"The moving force behind our building plans is the Occupational Safety and Health Act of 1970," Doctor Kent explained. "State inspectors have ruled that Caldwell, Comstock, East Roberts, Roberts, and Stone Halls do not meet the OSHA safety standards. Also, these buildings are obsolete from an educational standpoint," he declared.

Although no firm decision has been made, Doctor Kent revealed that the open space at the far west end of the quad is the proposed site for an eight to ten story tower structure.

Before the new building was proposed, the Office of General Services explored the possibility of refurbishing the five existing buildings. According to Doctor Kent, the cost of bringing Caldwell, Comstock, East Roberts, Roberts, and Stone up to OSHA's standards, while maintaining the same amount of usable space, would be approximately as much as a brand new building.

Moreover, it would be impossible to renovate these landmarks without destroying their architectural style. Present day safety and health standards require the addition of facilities for the handicapped, and the construction of stairs at the ends of corridors. Upper floors constructed of wood must be ripped out and replaced with fireproof materials.

"We concluded that it would not be possible to bring these five buildings up to standards and still retain the amount of space we now have without substantially altering their architectural design," Doctor Kent emphasized.

The proposed new Ag building will be located opposite Mann Library at the far west end of the quadrangle as indicated by the dotted area.
The obsolescence of the old buildings is clearly illustrated by the fact that the total 120,000 square feet of usable space presently contained in these five buildings will be made available with the construction of one new, modern facility containing all the necessary conveniences for the handicapped.

"The planning stage of such an important and expensive operation is long and complicated," Doctor Kent observed, "and many people and agencies are involved." The College of Agriculture and Life Sciences is coordinating its plans with the Cornell University Planning Office, the State University of New York, and the State University Construction Fund.

"When the College of Agriculture needs space, Cornell University must approve the land, the State University approves the plans and the Construction Fund office not only approves the plans, it also hires the architect and supervises construction," Doctor Kent explained. "Ulrich Franzen and Associates are the architects who are working with us on the siting plans," he added.

Choosing the best location for the new building was not a simple task. It was necessary to consider the availability of existing facilities, including gas, water, and electricity. "We also paid a great deal of attention to the present traffic flow of people and cars," Doctor Kent said. "And of course, we were forced to examine the long range plans for University construction as well as the aesthetic factors involved."

Current plans call for including the departments of Education, Entomology, Floriculture, Introductory Biology Teaching, Ornamental Horticulture, Pomology, and Vegetable Crops in the proposed replacement structure. These departments will be allotted the same amount of space as they presently occupy except for Introductory Biology Teaching, which will be expanded by 50 percent.

"We also plan to include some of the departments from the Plant Science building which require wet labs," Doctor Kent elaborated. "The space vacated by these departments will be renovated for Communication Arts and the administrative offices of the College of Agriculture and Life Sciences. They will occupy the first and second floors of Plant Science."

What does the future hold for the areas now occupied by Caldwell, Comstock, East Roberts, Roberts, and Stone Halls? According to Doctor Kent, this space is destined for new construction which will relieve substandard, overcrowded conditions in other departments in the College.

Since planning the new Ag building will require up to 30 months and actual construction will take two and one-half to three years, Doctor Kent predicted that it will be approximately the fall of 1978 before the dream becomes a reality.

In the meantime, Cornellians may look forward to the completion of the Ag quadrangle and to the best of facilities in the new building which is destined to serve the Cornell community within the next five years.

Gifts Increase Ag Alumni Fund

Cornell University has received the gift of $300,000 in the memory of the late Henry P. Morgenthau. The money was a gift of the estate of Morgenthau's wife, the late Marcelle Putnam Morgenthau, and will be added to the College of Agriculture and Life Sciences Fund.

Speaking at a luncheon held recently, Dean W. Keith Kennedy of the N.Y. State College of Agriculture and Life Sciences, said that the income from $200,000 of the endowment will be used to support a graduate program in agricultural and rural finance, and to provide funds for graduate research in those areas. In addition, scholarships will be provided for undergraduate students who express an interest in agricultural finance, farm management, conservation or agricultural production. The School of Business and Public Administration will receive $100,000 of the gift.

A native of New York City, Morgenthau served as Secretary of the Treasury under President Roosevelt from 1934 until the President's death in 1945. He had served as Acting-Secretary of the Treasury in 1933. Prior to joining the President's Cabinet, Morgenthau served on numerous State and Federal commissions dealing with conservation and agriculture, including the Federal Farm Board and its successor, the Farm Credit Administration.

Morgenthau owned and published the "American Agriculturist" from 1922 to 1933, and promoted interest in conservation and modern farming methods. The owner and operator of a 1700-acre farm in Dutchess County for most of his life, Morgenthau first studied and developed an interest in agriculture at Cornell in 1912 and 1913.

Summary of Recent Gifts

<table>
<thead>
<tr>
<th>College of Agriculture and Life Sciences Fund</th>
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<td>Summary of Gifts January 1, 1973 to October 1, 1973</td>
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<table>
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<td>439 Individuals have contributed</td>
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<td>18 Organizations have contributed</td>
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<td>6 Foundations have contributed</td>
<td>44,200.00</td>
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<td><strong>492 TOTALS</strong></td>
<td><strong>$139,863.00</strong></td>
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Researchers To Locate Here?

by KENNETH RICHARDSON '75

At this time Cornell University and the Boyce-Thompson Institute are very close to an agreement on terms that would allow the institute to relocate in the Ithaca area. This was not the case a few months ago.

The Boyce-Thompson Institute (BTI) is presently located in Yonkers, New York. Approximately one year ago BTI made the decision to relocate to another area. The institute began discussions with Cornell University on the possibility of moving to the Cornell Campus. BTI representatives told Cornell that they did not expect to make a final decision right away. They made it clear that they would continue discussing the situation with Cornell for a year, and a decision would be made at the end of that time. That decision is still forthcoming.

However, early in 1973 the situation changed somewhat. Oregon State University had now entered into discussions with BTI in an attempt to get the institution to move to the Oregon campus. The chances that BTI would move to Cornell began to appear very slim. Cornell's offer to BTI was considerably less than the lucrative offer made by Oregon State University (OSU). In the months that followed OSU and BTI drafted a proposed affiliation agreement. According to this agreement OSU would build a laboratory, greenhouses, and supply 25 acres of land for BTI use. OSU would also provide regular maintenance of the laboratory and greenhouses.

According to the Dean of the College of Agriculture and Life Sciences, W. Keith Kennedy, "This was an extremely attractive offer which was made to the Boyce-Thompson Institute. They didn't anticipate having a building built and maintained for them."

With that offer the talks between BTI and OSU continued to approach a final agreement. The only hope Cornell now appeared to have was that the Oregon State Legislature would fail to pass the bill that would give OSU the $7 million needed for the project. But early in July 1973, the bill was passed and signed by the Governor of Oregon.

"We knew about Oregon State's offer," continued Dean Kennedy, "but we did not see how a counter offer could be made."

Dean Kennedy did contact the Commerce Department of New York State to alert them to the fact that BTI would probably move to Oregon unless New York could make a counter offer. The Commerce Department could only offer BTI a long term loan from the New York State Dormitory Authority. A low interest loan was not a very attractive offer when compared to OSU's rent-free building and other facilities.

It was sheer luck that gave Cornell University the chance to reach agreement with BTI. It started when the Governor of New York State decided to call an Extraordinary session of the Legislature in July of this year. The session is termed "Extraordinary" because it comes at a time of the year when the legislature normally does not meet. Ordinarily the New York State Legislature meets only from January to April or May. Under normal conditions the next session of the legislature would have been in early 1974.

During the weeks before this Extraordinary session Lieutenant Governor Malcolm Wilson contacted a BTI representative and indicated to him that he did not want to see BTI relocate out of New York State. Wilson, by the way is a resident of Yonkers. The matter was then brought up at the Extraordinary Session of the legislature. At this session New York State authorized the expenditure of $8.5 million to the State University of New York, of which the College of Agriculture and Life Sciences is a part.

This money is to build certain facilities for BTI use if it decides to move to the Cornell Campus. These facilities may be assigned to BTI under terms agreeable to Cornell University and the State University of New York. Such terms must also be approved by the Director of the Budget of New York State according to the bill.

Cornell is presently close to a final agreement with BTI due to the generosity of the New York State Legislature. As of late September lawyers representing Cornell and BTI were preparing a contract to cover the affiliation of BTI with Cornell. If the legislature had not met in the Extraordinary session in July, their next meeting would have been in January 1974. By that time BTI could have been well on its way to OSU.

There are a number of advantages to have the Boyce-Thompson Institute relocate to Cornell. BTI's main areas of research are growth processes in plants, chemical regulation of pests and plant growth, the physiology of seeds, the nature of plant fibers, and insect studies. Much of Cornell's research is in similar fields. If BTI was to move to this campus it would give both Cornell and BTI researchers a greater opportunity to collaborate.

For BTI, moving to Cornell will mean moving to an area conducive to research and containing many fine facilities already in operation.

If BTI moves here it would remain a separate entity with its own board of directors. However, of the 12 to 16 members on the board at least four will come from Cornell.

Of course, the option of moving to Oregon is still open to the Boyce-Thompson Institute, but its chances of moving here are high.
If you have been away from Cornell for a number of years or just over the summer, you will notice quite a few different sights on campus. New buildings with severe architectural designs have been erected among the older, more graceful buildings, while work is being done to make the inside of these buildings more comfortable and the outside more beautiful. A few of these new sights are:

The Social Sciences' building (upper right), Uris Hall, which is called "Old Rusty" for its outer beams are left open to the elements.

The Multicategorical Wing (lower right) at the Veterinary College raises its ten story height above campus.

The Chilled Lake and pup is being extended for cooling through I.M. Pei's I which is located by some as a by others as a

The Cascades which was with is being cleared enjoyed by al
The Southern reaches of the campus

System (center) which
pools water from Beebe
through a closed system
of Cornell's buildings,
The Museum (lower left)
the Arts quad, is seen
in the flood of 1972,
repaired, so it can be
again.
HAP Makes It Happen

The difference between the way HAP people do research and the way the rest of the University does research is that research is usually done about people for institutions; in HAP, we do research about institutions for people.

—Anonymous HAP staff person

After maneuvering the big lumbering Blue Bus down miles of country roads, section leader Sam Salkin finally pulled up to one of the regularly scheduled stops on his route, an old isolated house trailer. Immediately, he and one of his student aids, Meg Siegler, '75, were engulfed by the hugs, handshakes and laughter that usually accompany his visits to the various low and middle income areas of rural Tompkins County. To the many children who make use of the remodeled school bus' play area and library, the sight of Sam and the Blue Bus represents a break from house and school work. It means time to meet new people, formulate new ideas, and generally have a good time. To the parents, however, the Blue Bus means much more than this.

In April of 1972, for example, the Blue Bus section of the Human Affairs Program, prompted by the complaints of children and parents in the community, investigated a discriminatory free lunch program in the Caroline Elementary School. The result was the formation of a Caroline Concerned Parents Group and a new and equitable lunch program.

The HAP program is designed so that the community members as well as Cornell students benefit from these interactions. The field work done on the bus by students enrolled in that section of the HAP program involves "storefront" type advocacy and education. Since the bus visits are on a regularly scheduled basis, Blue Bus affords an opportunity to easily build up community-student relationships. People are involved with members of the community in all types of daily situations, not just crises.

Dan Leahy, the newly-appointed director of the Human Affairs Program, is young, energetic, and fully prepared to increase the potential of the already diversified program. "One of the problems," he explains, "is getting people to understand the ways in which they can fit into the HAP program." Sitting at his typewriter in the almost bare, freshly painted offices on College Avenue, Leahy outlined the history and present roles of the seven separate and distinct sections of the HAP program.

The program was mainly a response to the black student protests of 1969, which prompted the formation of the Africana Center and the HAP program. It was a way for students and faculty to become involved in concrete problem solving within the community. One of the unusual aspects of the program was its availability to undergraduate students, offering actual field work usually granted only to graduate students and professors. The program was then funded by a Ford Foundation Grant, a New World Grant, and a Title One Federal Grant. However, much to the dismay of the Ithaca community and Cornell students, when the grants ran out they were not renewed. This sparked a march for support in April 1971. At a rally outside Day Hall, speakers urged the University to continue to fund the program in order to provide "something positive for low-income and working people."

In February of 1971, the University faculty submitted a report, favorable towards the HAP program, recommending that the University support the program. Since that time, the program has been working on an enrollment based funding mechanism. This means that each college of the university gives an amount of money proportional to the number of students from that college enrolled in HAP. The College of Agriculture and Life Sciences is the fourth largest contributor to the program, funding almost six thousand dollars towards the 104 thousand dollar budget. This money, however, is still inadequate when compared with the cost of running so extensive a program.

Despite financial problems, the HAP program has blossomed into a valuable resource tool that emphasizes three goals: learning through active problem solving, the development of widespread community control, and the constant examination of education and the role of the highly educated in the struggle for social justice.

Each semester the Human Affairs Program accepts approximately 150 undergraduate students from colleges.
at Cornell, as well as some extramural students from other institutions and from the Ithaca community. They enroll in small, six-credit sections stressing community field work backed up by seminars and readings.

While students do not make decisions for the community, they often provide information, analyses, and organizational skills.

The Community Communications section of HAP plays an important role in bringing the information to the rural public. The major vehicle has been an independent community newspaper, the Tompkins County Bulletin. Director Leahy envisions further possibilities: "We want the Communications section to develop other projects in communication, and hopefully to branch out into radio, cable television and alternate forms of media to aid communication in the rural areas."

Essentially, the Human Affairs Program is people like Sam Salkin, Meg Siegler, Dan Leahy, and dozens of others, who act as connecting links between students and community, each with his or her own special skills and qualities. Without HAP, gaps between students and community, and between community and social programs would be that much greater.

HAP Director Dan Leahy coordinates all program activities, making certain that services reach the people.
Tomorrow’s Harvest... Untouched By Human Hands

by CAROL EPSTEIN '74

"Our field is a broad one," said Prof. Howard W. Riley, "Our subjects cover work that ordinarily is divided between a number of colleges, and yet we are only one department of a single college."

Today, Agricultural Engineering is an even more diverse discipline than it was when "Gas Engine" Riley, later immortalized in Cornell’s Riley-Robb Hall, made his comment 65 years ago. Riley's department concentrated its efforts on "elementary instruction in the adjustment and operation of farm machinery." Currently, Cornell’s agricultural engineers are wrestling with such problems as the reduction of water pollution and the development of a mechanical device to analyze gas mixtures.

Mechanical harvesting of fruit and vegetables, unheard of in Professor Riley’s Department of Rural Engineering, is a major concern of Cornell’s agricultural engineers today. The supply of hand labor available for the seasonal harvest in New York State has diminished dramatically in the past two decades, and growers have become increasingly anxious to mechanize their operations. Unfortunately, as Prof. Wesley W. Gunkel points out, as automation replaces migratory labor on the orchard and farm, fewer workers consider it worthwhile to come to New York, and the shortage of labor increases.

"I don't think we've ever moved into an area where labor is plentiful and attempted to mechanize it," Professor Gunkel explains. Nevertheless, each new machine developed to help the grower, who can no longer get enough seasonal workers, decreases the area need for fruit pickers and vegetable harvesters and creates the need for still more machines.

Cornell's Department of Agricultural Engineering developed the principles used in commercial cherry, grape, "processing" apple, and cabbage harvesters. The fruit harvesting machines work basically by shaking or knocking the produce off the branch or vine and catching it. The cabbage harvester pulls the heads away from the ground, saws them off at the stem, and conveys them to a holding tank. Professors E. Stanley Shepardson and Gerald E. Rehkugler have adapted the principles of the cabbage harvester for use on lettuce. Before the lettuce harvester can be used commercially, however, modifications must be made in the handling of harvested lettuce.

Cornell's grape harvesting machine brought an unexpected bonus to the growers who used it. The machine harvested up to eight tons per hour, but more surprisingly, it was indirectly responsible for increased vineyard yields from 40 to 90 percent. The harvester required growers to modify their vine-training system, and the change proved extremely beneficial to the plants. Harvesting machines have since been developed which will work on vines trained in the traditional manner. This saves the vineyard owner the $200 to $400 cost per acre of switching over to the new system, but of course, does not give him the increased production.

Cornell’s agricultural engineers are now working on a way to harvest apples for sale on the fresh fruit market. "Processing" apples are shaken off the tree and collected on a catching frame. Bruising of the fruit is not a serious problem because the apples are converted into apple sauce or juice anyway. Fresh apples, however, must be brought to market in good condition.

The first Cornell device for harvesting apples with a minimum of bruises used the "pinball" approach—padded tines inserted between and around the branches slowed down the falling apples and directed them onto the catching frame. This method cut down on large bruises, but results were still not satisfactory, and the design was abandoned.

Next, the engineers produced a continuous harvesting device, where a rotating cylinder with padded tines oscillated to knock the apples loose and control their fall. Again, apples were too damaged for sale on the fresh-fruit market. However, the machine is now being tested for use on citrus trees.

The present design features three platforms which catch the apples after only a short fall and roll them
“Our philosophy is that any job done by a human can be mechanized. But when an aspect of judgment is involved, it becomes very difficult to duplicate the human. It’s very difficult and expensive to design a machine that has this judgment power.”

safely down. Two of the platforms consist of a series of long inflated air bags; the other is a solid padded unit. This model is still being developed.

How far will the mechanization of farm work spread?

“Our philosophy is that any job done by a human can be mechanized,” Professor Gunkel has said. But, he is quick to add, “When an aspect of judgment is involved, it becomes very difficult to duplicate the human. It’s very difficult and expensive to design a machine that has this judgment power.”

Norman R. Scott is an associate professor of Agricultural Engineering, but the nature of his research would have been another surprise to “Gas Engine” Riley back in 1907. Along with Prof. Ari van Tienhoven of the Department of Poultry Science, Professor Scott is investigating the hypothalamus of the chicken and the way it regulates body heat.

The hypothalamus is located at the base of the brain. Besides regulating body temperature, its functions include control of water balance, appetite, strong emotion such as fear or anger, and blood pressure, as well as exerting important effects on the pituitary gland.

Professor Scott is studying the hypothalamus “to understand the interaction between the animal and its thermal environment.”

The chicken’s environment has a definite effect on its productivity as a layer. Yet, experiments correlating weather conditions and annual egg production often produce conflicting evidence. For this reason, Professor Scott decided to investigate the chicken’s reaction to outside conditions directly, using such indexes as heart rate, respiration rate, hypothalamic temperature, body temperature, heat loss, and heat production.

Inflated platforms— an early model—the platforms catch the apples at two levels to reduce the distance of the fall.

A large part of Professor Scott’s task has been to develop instruments which can measure the chicken’s physiological responses without affecting them. He has devised the means to determine the bird’s body and hypothalamic temperature, heart rate, rate of oxygen consumption, and total heat loss. Currently, Professors Scott and van Tienhoven are using these biological measuring devices to discover the effects of certain chemicals on the chicken’s temperature regulation system.

Once the process of temperature control is understood, the information may have practical applications. If, for example, hens are found to lay the most eggs at a specific body temperature, artificially administered chemicals may help them maintain that temperature. Or, in theory, drugs could be used to temporarily alter the body temperature of human beings, to enable them to better acclimate to an extreme environment.

What else are Cornell’s agricultural engineers up to?

They’re looking for solutions to problems of agricultural waste disposal, for ways to cut down on farm accidents, and for new storage systems to keep produce fresh longer.

For, as Professor Riley said, the field is a broad one. “We don’t worry about trying to define it,” Associate Professor Gerald E. Rehkugler says, “We just do it.”

PICTURE CREDITS

Cover and page 10, 11—Elliott Saltzman; page 3, 4—Gary Canter; page 5—C. Hadley Smith; page 8, 9—Steven Raye; page 12, 13—Department of Agricultural Engineering.
This year marks the 25th anniversary of the formal existence of the State University of New York, and sharing in the celebration is the N.Y. State College of Agriculture and Life Sciences, Cornell University.

Beginning with 31 previously uncoordinated, State-supported institutions of higher education, the State University has grown in size and importance to realize its original goal. Today, the University system provides the people of New York State with an outstanding system of public higher education, offering opportunities for all.

Established in 1948 with 11 teachers’ colleges, six agricultural and technical institutes and five institutes of applied sciences, the system now includes 34 state campuses comprised of four university centers, 14 colleges of arts and sciences, two health sciences centers, six two-year agricultural and technical colleges, three specialized colleges and five statutory colleges. This last category includes the N.Y. State College of Agriculture and Life Sciences at Cornell. In addition, the system supports 38 locally sponsored community college campuses scattered throughout the State.

In the past 25 years the colleges of the University have graduated more than 515,600 students. Enrollment has grown from 28,000 in 1948 to more than 364,800 students last year.

The University’s 14,000 full-time faculty members offer instruction in 3,500 academic programs. Its libraries contain more than 8.4 million titles, and degree offerings range from the two-year A.A.S. degree level to the Ph.D.

But the University’s growth is reflected in people as well as in numbers. According to Chancellor Ernest L. Boyer, continuous growth in the University system has and will continue to mean a diversification of enrollment, college concepts, faculty and college programs to meet the needs of the people of New York State.

New and innovative steps toward the future have already been taken with the establishment of the Empire State College, a university without walls. The newly created university takes college to people who might never have attended a conventional campus.

With enrollment trends moving away from the traditional 18 to 21-year-old group, (one-third of the students enrolled in SUNY are over 21) Boyer feels that progressive changes in program structure and teaching techniques will permit the University to continue to attract outstanding students and maintain its position as the largest public university system anywhere.

Governor Rockefeller, speaking to the State Assembly on the 25th anniversary of SUNY, stated: “When we say today that New York has a state university system second to none, we mean both in size and academic stature.” In short, the University has accomplished a century of progress in 25 years.

**PROGRESS REPORT continued from page 4**

The elm program is not limited to scouting and subsequent actions. Trees are sprayed in April, before the leaves come out, with a concentrated solution of pesticide called methoxychlor to control bark beetles carrying DED spores. Another spray containing additional pesticides is administered at one month intervals beginning in late May-early June, with the intention of controlling leaf hoppers carrying phloem necrosis, and of possibly checking new DED infections.

The spraying can only be done under windless conditions. Because of the nature of the pesticides, it is done in early morning before cars and pedestrians are around.

The advent of phloem necrosis has undermined the program used against DED. First discovered in western and central New York State in 1971, the disease is deadly, rapid, and invincible. The best that can be done against phloem necrosis is to rigidly practice sanitation to prevent spreading. It is especially insidious because it increases the amount of dead elm in which bark beetles can breed, thus encouraging the possibility of DED.

Caused by a submicroscopic mycoplasma which invades and destroys the phloem tissue, phloem necrosis begins with the roots of a tree and progresses up the trunk, seldom causing observable symptoms until irreparable damage has been done. Though efforts are being made to study and find ways to fight the disease, little can be done now except to remove an infected tree.

Because of this the program at Cornell takes on a somber note. According to Professor Sinclair there is little reason to hope for the diseases to subside before nearly all of Cornell’s stately elms are gone. The main aim of the program has now shifted to one of buying time, so that the present elms can be replaced by other trees, especially oaks.

Though American elms will not become extinct, their future as a shade tree locally is dim. It is possible that the campus will have only two or three “museum elms” by 1990, as the two diseases will only ease up when there is no longer a rich source of elms to infest.

Perhaps future generations of Cornell students, ignorant of the awesome beauty provided by hundreds of elm trees in days past, will not be saddened as the final handful of elms slowly depart. But for those of us who have appreciated the splendor, lolled in the shade while the elms prospered, a sadness will be felt for the loss of these passive giants.
Henry A. Wadsworth (Ph.D. '62) has been appointed associate director of Cooperative Extension at Cornell University. His appointment is effective September 1. He will be responsible for the rural development program and community resources development programs. Wadsworth is a nationally recognized leader in the field of community development and public policy.

Daniel G. Sisler (Ph.D. '62) professor of agricultural economics, has been honored as one of the first 76 teachers within the State University system to receive the Chancellor's Award for Excellence in teaching.

The award recognizes excellence in undergraduate instruction and carries a $500 honorarium.

The Chancellor's Award marks the second time that Sisler has been commended for his teaching. In 1964 he received the Professor of Merit Award, the most coveted award of the N.Y. State College of Agriculture and Life Sciences. Students selected Sisler for this award after only three years of teaching. Others who have been honored usually have had a decade or two of experience.

Robert S. Smith (Ph.D. '52) professor of farm finance in the Department of Agricultural Economics has been honored with the Meritorious Public Service Award of the Internal Revenue Service of the Department of the Treasury.

He was cited for "outstanding contributions in informing the taxpayer public of its federal tax responsibilities and contributing to a better understanding by the public of Internal Revenue laws and regulations."

Smith, a member of the College faculty since 1954, oversees the taxpayer education extension program at Cornell. As part of the program he presents income tax conferences across the state which try to make farm income reporting more complete, accurate and responsible.

Roy L. Millar (Ph.D. '55) a Cornell University plant pathologist, was elected a Fellow of the American Phytopathological Society recently in recognition of his professional accomplishments.

A member of the Cornell faculty since 1959, Millar is on the staff of the Department of Plant Pathology at the N.Y. State College of Agriculture and Life Sciences.

He was recognized for his outstanding contributions to the advancement of plant pathology and for meritorious service to the national organization of plant pathologists.

Gerald H. Adams '73, has been named the second place winner of the 1973 Student Recognition Contest sponsored by the Dairy Shrine Club. The announcement was made by club vice-president, Prof. George Trimberger at the annual meeting of the American Dairy Science Association held at Washington State University.

E. John Posson '70, has joined the faculty of the State University Agricultural and Technical College at Alfred as instructor in the Department of Agricultural Industries. His duties will be in the area of agricultural engineering and mechanics.

Team Takes Third

A judging team from Cornell University placed third in the Intercollegiate Dairy Cattle Judging Contest at Eastern States Exposition, Springfield, Mass., recently.

Scoring 2,210 points, just three points off the lead, the three-man team placed behind teams from the University of New Hampshire and Pennsylvania State University. Twelve teams competed. Virginia Polytechnic Institute was fourth and the University of Kentucky placed fifth.

Coached by Prof. George W. Trimberger, animal scientist in the N.Y. State College of Agriculture and Life Sciences, Cornell, the team placed first in judging Brown Swiss and Guernseys, second in the Jersey class, seventh in Ayrshires and ninth in judging Holsteins.

Barbara McNamara of RFD, West Lebanon, N.H., '75, led the Cornell team placing sixth overall. She was fourth in judging Brown Swiss, Guernseys and Jerseys.

Retired professor Myron D. Lacy and animal scientist John I. Miller of the N.Y. State College of Agriculture and Life Sciences, Cornell University, have been honored by friends and business associates with the establishment of the Lacy-Miller Scholarship Fund.

The fund will provide scholarships for outstanding students in the animal science department, with preference given to students interested in the beef industry as a career.

Francis J. Vuillemot '43, county administrator for N.Y. Cooperative Extension in Cayuga County, has been honored by the National Association of County Agricultural Agents. He received the 1973 National County Agents Distinguished Service Award at the organization's recent annual meeting. Vuillemot, a veteran of 27 years with Cooperative Extension, was cited for his leadership in establishing successful community resource development programs in Cayuga County.
The College of Agriculture and Life Sciences Fund was established by alumni and friends of the College as a cooperative, supportive resource for maintaining leadership in education and training.

Now over one million dollars, this permanent endowment fund sustains innovative programs and unique scholarships in the College of Agriculture and Life Sciences. Through their generosity, alumni and friends of the College have established this base of support for special needs.

To enable the College of Agriculture and Life Sciences to continue to offer an outstanding education to many young men and women, the continued development of the College of Agriculture and Life Sciences Fund is essential.

Strengthened alumni relations, through a sense of awareness, interest, and support among alumni and friends of the College, will ensure this continued development to take place.

Join now with fellow alumni and friends and help create that margin of excellence that will keep your College a major contributor of new knowledge for the well-being of mankind.

**Purposes of the Fund:**

- To stimulate and cement associations with the College of Agriculture and Life Sciences
- To support innovative programs and unique scholarships
- To provide the "seed" funds so often essential to new discoveries of great benefit
- To enable the College to maintain its pioneering leadership in education and training

The ways in which you may contribute to the Fund's work are:

- Outright gifts of cash or marketable securities
- Gifts with the income retained by the donor for his lifetime
- Testamentary giving, such as outright, residuary, or contingency bequests
- Gifts of other assets, such as real property, equipment, book collections, etc.

In planning your gift to the fund, may we assist you in selecting a way that might enable you to make a larger gift than you thought possible and may also reduce the immediate out-of-pocket cost?

For further information, contact:

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Cornell University owes its founding to the generosity of Ezra Cornell and to the Morrill Act of 1862, an act that established the land-grant college system in the United States. This legislation was of great importance in developing higher education in agriculture and other scientific fields throughout the nation.

With the acceptance of the land-grant status, Cornell had a mission to accomplish. According to W. Keith Kennedy, dean of the College of Agriculture and Life Sciences, "the mission of the land-grant university of Cornell is to serve the needs of the people in the State. At present, much of that commitment rests with the Colleges of Agriculture and Human Ecology," Dean Kennedy explains that this is because "Federal appropriations by Congress under several agricultural education laws allow the two schools to be more responsive to the land-grant mission."

The title of the Morrill Act (the first agricultural education law) states that it is, "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts." Under the provisions of the bill, each state was to receive 30,000 acres of federally owned land for each Senator and Representative in Congress, according to the apportionment of 1860. If no such land was available in a particular state, that state would receive scrip for public lands in other areas. New York, the most populous state, received scrip equivalent to 989,920 acres of land.

This land, or scrip, was to be sold to private citizens. The capital obtained was to be used for "the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such a manner as the legislation of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Each state legislature was allowed to choose the institution or institutions that would receive the generous federal aid. Cornell and New York State were lucky in having two highly principled and motivated state senators who fought for the betterment of higher education. These men were Andrew Dickson White and Ezra Cornell.

White believed that the money should stay in one lump sum, and in so doing, fought against the actions to give the grant to the People's College of Havana and the Agricultural College at Ovid. After much haggling in the State Legislature, Ezra Cornell's offer of a $500,000 endowment for a new school (which included 300 acres of land and buildings) was accepted, and the land-grant status was awarded to his university. In 1865, Cornell University was given its charter.

Because of Ezra Cornell's financial backing the University did not have to sell its scrip during the first few years. The Wisconsin land supplied by the federal government appreciated in value almost ten times over 25 years.

Dean Kennedy reports that "Cornell University started out with by far the largest endowment of any of the land-grant universities as a result of this wise decision on the part of Mr. Cornell."

The Cornell charter paraphrases the statements of the Morrill Act and therefore, right from the start, committed itself to serving the rural and industrial classes. However, Cornell also stipulated that "other branches of science and knowledge may be embraced in the plan of instruction and investigation."

Dean Kennedy says that the original mission of the land-grant college was "to enable the sons and daughters of farmers and working classes, the then disadvantaged, to obtain a college education."

However, with time the University grew and so did its mission towards the population of New York State. Research was of great importance — agriculture and other sciences had to be understood before they could be taught. The federal government responded to this call. In 1887, the Hatch Act was signed into law. It provided funds for the establishment and maintenance of agricultural experiment stations.

As knowledge grew, so did the desire to disseminate it to the entire agricultural community. Important new areas of study involved home economics and rural living standards. The information-seeking public now included the farmer's family and other rural dwellers. The Smith-Lever Act of 1914 provided federal funds for work in cooperative agricultural extension.

Cornell's mission therefore, during the early twentieth century was specifically to educate the industrial masses and to provide research and extension work in agricul-
ture. Dean Kennedy notes that “no public funds were given to engineering and other departments outside of resident instruction — they had to go on their own. One can see why public service and applied research play small roles there.”

Today’s mission has broadened considerably and encompasses many fields of education. Prof. Robert A. Plane, chairman of the University’s land-grant study committee says, “In the past the statutory colleges have taken on too much of the land-grant responsibility.” Looking to the future he sees the endowed divisions assuming a greater role.

Professor Plane claims, “The committee is unanimous in believing that all of Cornell has a land-grant obligation. In obtaining the land grant the mission is for the whole University, not one college. We should not abandon either of the two original fields of study (Agriculture & Mechanical Arts) because neither is completed. In making advances in technology we have created problems in other areas. We can’t quit now.”

Although the other schools do not get federal funds, the Water Resource Act of 1962 provided financial backing for engineering projects. Professor Plane sees one of Cornell’s future roles as an active force in improving the quality of the American environment and way of life.

One area the committee has looked at is the spectrum of students at Cornell. Professor Plane asks, “How broad is it now? Are all areas covered or are some denied? The one area we definitely know about are older students — those now 25 years of age or older. If they missed getting an education before, can they get it now? What about those with a baccalaureate degree who need further degrees or different course work? Shouldn’t the land-grant institution meet their needs?” One answer may be the enlargement of the extension program at Cornell to cover all subjects of study and research.

Professor Plane also mentioned education of minority groups and disadvantaged students. He says, “My hope is for more Federal and State programs of student aid to increase the economic spread of the student body. The present COSEP program only meets part of this obligation.”

Besides the question of who is being educated, there is the question of what is being taught. Professor Plane answers, “We can’t ignore the old studies — they helped build our country. But now we have social problems. There is a crying need for someone to do something about the question of values. It’s my own feeling that the part of the University to be involved is the humanities.” He believes that applied humanities and social sciences can be of use to people in solving their non-technological problems in the future just as applied sciences helped solve their technological problems in the past.

Professor Plane explains, “We have a commitment to society. We cannot turn our backs on today’s problems, but we can’t concentrate just on immediate concerns.” He says, “We must provide our students with the tools to know how to deal with the future.”

Therefore, resident instruction will continue to be of great importance at Cornell. Studies in the humanities and social sciences will assist in the land-grant mission of educating the industrial classes in all fields, including agriculture and engineering. With continued population growth and increased demands for food and material possessions, the integration of these studies will be essential for insuring a healthy society.

Dean Kennedy says, “The demand for food and exports will remain extremely high in the foreseeable future. We’ll want to be buying oil and other materials — we’ll want to generate income. Agricultural colleges within the land-grant universities will have the job of understanding the basic biological processes important in our agricultural production. We will use our basic knowledge in developing new production techniques, to be carried by extension to the farmers so that it will be most useful.

“So in addition to training men and women in agricultural studies,” Dean Kennedy continued, “we will also be involved in research and extension in all fields of education. In turning our attention to the non-farm and urban population, we must look to people in other colleges, agencies and other institutions of higher learning for assistance. We will help to the extent that our expertise is appropriate, as in nutrition, consumer protection, and health. We can’t do the job by ourselves. It takes complementary expertise and talents.”

Dean Kennedy also mentioned that the college of agriculture in a land-grant university should be a contributor to solving the problems of urban areas. This includes developing and maintaining parks, and improving recreational areas for fishing and wildlife.

The mission of Cornell and the other land-grant institutions has shifted somewhat from its original format. The emphasis is still on agriculture and the mechanical arts, but, as Professor Plane says, “The most significant change the committee is talking about is a change in attitude, particularly among the faculty of the endowed colleges. We must examine our teaching and research and develop an approach to education that equips people with skills and ideas to deal with the future.

“What makes our economy and country strong,” concluded Professor Plane, “is our system of education; a system of applied practical education for all classes, due largely to the formation of the land-grant universities.”

“We have a commitment to society. We cannot turn our backs on today’s problems, but we can’t concentrate just on immediate concerns. We must provide our students with the tools to know how to deal with the future.”
To a prospective Cornell student visiting the campus, things can seem pretty confusing. The largeness of the school, the many and varied types milling about, and the confusing task of choosing courses may add up to be very threatening to one who has not yet become adjusted to college life.

The Cornell Ambassador program of the College of Agriculture and Life Sciences was initiated for the purpose of easing the tension of a visiting high school student. Cornell agriculture “veterans” who have volunteered their time to serve as ambassadors find themselves in a one-to-one situation with an applicant who is generally full of questions he would not be asking a professor, a parent, or an interviewer.

Prof. Leonard W. Feddema, the director of the Office of Admissions, which runs the program, is convinced that the one-to-one atmosphere along with the similarity in age prompts the high schooler to open up with questions which are important to have answered. While he himself is often confronted with issues such as financial aid, chances of being accepted, and other “business matters,” the Cornell prospect is more likely to relate to a contemporary concerning matters of social life, food, living conditions, and so on.

Because of the importance he attaches to the ambassador program, Professor Feddema feels that praise is in order for those who have “taken time out from a busy schedule to show some concern for the people coming to the campus.” They are in his opinion, “basically outgoing people” who “have never seen a stranger.” In short, warm, helpful, and friendly.

The outcome of what the ambassadors do is generally a positive one. What Professor Feddema hears from the students on their return from a tour is that “this is a friendly campus, kids are very open.”

The ambassador program qualifies as somewhat unique, notes Professor Feddema, when one considers its major aim to be an informative, rather than a recruitment device. While Cornell University offers a group tour to parents and prospective freshmen starting from Willard Straight Hall, the Ag. ambassador program pairs one person with one Cornell student, without parents, on an informal tour of the College of Agriculture and Life Sciences. The situation seems to be most conducive to the enlightenment of the visitor.

The student chairman of the program, Barry Schoenfeld ’76, remarks: “They open up — they’ll ask questions you know they’d never ask an interviewer.”

The persons responsible for arranging the sessions with an ambassador are Schoenfeld and Mrs. Neiderman, secretary for the Office of Admissions. When she sends information to a person who has expressed interest in coming to the school, she includes a card offering a tour with a College of Agriculture and Life Sciences ambassador. This card tells the interested party that a meeting with an ambassador can be arranged on the day he plans to come for a visit and/or interview. If the high school student wishes to see an ambassador, he returns the card indicating the date and time that he will be at Cornell.

Periodically during the week Barry Schoenfeld will pick up these cards at the Admissions Office in Roberts Hall. He will then consult his list of volunteers and try to choose someone who has the time available to meet with the applicant. Whenever possible, the ambassador’s major will try to match with the visitor’s interest.

The ambassador meets the visitor in Roberts, usually right after he has his interview. They then take leave of parents and faculty and the “tour” is begun. Often the ambassador will bring his guest to a class with him, or else direct him to a class he may have an interest in. The informality and flexibility of the tours seem to add to the open atmosphere wherein the potential student feels at ease to ask the questions he wants to.

As a supplement to the ambassador’s own ingenuity, the admissions office maintains a list of classes whose professors have indicated a willingness to welcome visitors to the campus. The ambassador may check this list and the interest of his guest, and perhaps take him to a class he would enjoy attending.

Professor Feddema feels that seeing the physical plan of a college before one applies is a real necessity for the applicant to make a responsible decision. Likewise he feels that exposure to an actual college class is a very worthwhile experience to a student seeking to make a well informed decision on the college to attend.

For the Admissions Office, the program is one they can point to with pride considering the positive feedback received. For the ambassadors, a feeling of warmth must be felt at the opportunity to help out people whose uncertainty and discomfort they must remember from their own pre-Cornell days. Perhaps most important of all, to the prospective student the program radiates a feeling of friendship and consideration, qualities which are often absent from the harsh and pressured task of applying to college.
The whole idea of starting the paper was to have a locally controlled communications medium in Newfield."
So says Sam Pizzigati, '70, editor of the newly founded Newfield News, a non-profit, independent, local newspaper catering to the information needs of the citizens of rural Newfield.

Being a non-profit paper, the Newfield News depends in large part upon the help of the community it serves. And help it gets! The town library (formerly the Grange Hall) donated its second floor for an office, rent free. Plumbing facilities for the office have been donated also, and will be installed free of charge in the near future. Response to subscription and advertising drives, both vital to a growing newspaper, have been very high. Area businesses have supported the paper by buying ad space, and the subscription ratio (number of subscribers to total population of circulation area) is one of the highest anywhere.

Having only two paid staff members (editor Pizzigati and advertising manager Robin Anderson), the Newfield News relies largely upon volunteers to gather and write articles for each weekly edition. To date, over fifty townspeople have contributed articles to the paper.

From the efforts and talents of the volunteers, the small-town flavor of the newspaper is derived. Mike Finley does features and photography, and helps compose each edition. R. R. Morrow (a professor at Cornell's College of Agriculture and Life Sciences) is sports editor. Carol Drader does a column on neighborhood doings. Sally Seaney coordinates the paper's subscriptions and writes a regular gardening column. Kris Finley does feature stories, a weekly recipe corner, and handles phone calls to the paper during the day. Pud Blayda writes a popular column entitled "Dear Town." Without these and the many others not mentioned here, the paper would not be able to exist.

A typical edition of the Newfield News contains a pleasant small-town variety of information. An article on the Town Justice race and a report on a Newfield High School football game share page one. Inside can be found a column devoted to the Lions Club of Newfield, a calendar of goings-on, a recipe corner, a photo feature on the Connecticut Hill Game Management Area, a gardening column, some poetry, and more, all written with the Newfield resident in mind.
The reception given Newfield’s first local publication since 1890 has been a good one, and editor Pizzagati sees its future in optimistic terms. With a paid circulation rapidly advancing toward the first-year goal of 1,000 set last February at the paper’s inception, prospects seem high for the Newfield News to become Tompkins County’s largest weekly newspaper.

Despite aiming toward more fully saturating the Newfield-West Danby area with more subscriptions, editor Pizzigati is against expanding the paper to cover a larger area. He feels that this could serve to defeat the purpose of the paper—that of servicing a local community.

Imagine the rural farmer back in the teen years of the twentieth century. Transportation was limited, magazines and newspapers were not so plentiful as now, and radio and television were but dreams. The farmer’s life was a hard one. In setting up his farm, he had committed himself to making a living for his family, as well as supplying the growing number of city people with food for their tables. The farmer ran a business in which he played the roles of management, laborer, accountant, and salesman. It was a full-time, never-ending job.

The New York State College of Agriculture at Cornell was aware of the hardships facing the farmer and set about “to aid farming, to improve farm life and to enable a farmer to do more work with less hard labor.” Educating the farmer was a great idea, but the average farmer could not afford to leave his family and his main source of income to attend college classes. So the question plaguing college administrators was how to educate the farmer without taking him away from his life’s work.

The answer was found in a program which already existed in the College of Agriculture. For several years, the Office of Publications at Cornell had been sending “reading courses” to the farm, a series of bulletins covering agricultural topics. The farmer would read the bulletins during his spare time, answer the questions at the end of each reading and return his answers to the college. Why not expand upon this correspondence concept? And so, in 1920 the Cornell Farm Study Courses were introduced—home study courses for the farmer.

These courses were not designed to take the place of college courses; no college credit was given. The sole purpose of the courses was to help the farmer learn more about agriculture as it applied to his particular need, without taking him away from his work.

The courses covered all aspects of farming. Each course was organized and written by extension specialists of the various departments within the College of Agriculture, based upon the need and demand for such a course. The early years of the program were very successful, indicating a great need and demand for the

(continued on page 14)
Cornell University's Arnot Forest, administered by the Department of Natural Resources in the College of Agriculture and Life Sciences, is located about 20 miles southwest of Ithaca. The 4,000-acre outdoor facility is designed as a research, teaching, and demonstration area where forestry, wildlife management, and soil and water conservation subjects receive major attention. Special places to see and visit include the forest's picnic area, sugarhouse, sawmill, and charcoal kiln. 4-H members, Cornell students, and other groups have a chance to study outdoor life in the Arnot, seeing animals in natural settings. Nature observers may glimpse such wild creatures as raccoons, foxes, deer, rabbits, squirrels, and chipmunks.

All in all, Cornell's Arnot Forest is a good place to look, learn, and enjoy.
Learn – Enjoy
"To put it simply, we are involved in world food from the soil to the stomachs of the people," Dr. Kenneth L. Turk, Director of the International Agriculture program in the College of Agriculture and Life Sciences explained recently.

From its earliest days, Cornell University has shared the benefits of its agricultural knowledge with developing nations in all parts of the world. Probably no other college in the United States has such a long tradition in training foreign students in the field of agriculture.

In the mid 1920's, the Department of Plant Breeding pioneered an exchange program of students and faculty with Nanking University in China. Cornell professors trained Chinese students who became leaders in Chinese agriculture until the 1949 takeover by the Communists, and some of them are leaders today in Taiwan.

This successful program in China was the first notable example of international cooperation in agricultural education and research. It became the model for the involvement of U.S. universities in university development abroad which took place as a part of President Truman's Point IV Program announced in 1948. Today this program is operating through the U.S. Agency for International Development (AID).

A few years later, staff members from the Department of Agricultural Economics also participated at Nanking in a program to develop teaching and research in agricultural economics.

In 1960, Cornell enrolled 17 agricultural students from 11 countries. Last year, over 1200 international students from more than 90 countries attended the university, and one-third of these students were registered in the College of Agriculture and Life Sciences.

"By way of contrast, less than three percent of all foreign students coming to the United States study agriculture," Dr. Turk remarked. "The fact that one-third of all foreign students at Cornell are enrolled in agriculture indicates the fine reputation of the College of Agriculture and Life Sciences around the world."

Historically, the college has been deeply committed to a program of resident instruction, research and extension teaching which has left its mark on state and national agricultural progress.

Involvement in International Agriculture adds a fourth dimension to the program, designed to make similar contributions on a worldwide basis, according to Dr. Turk.

"We recognize the interaction of world food, population growth and employment problems," Dr. Turk continued. "Consequently, the College of Agriculture and Life Sciences welcomes the responsibility of participating in international development."

The College's Program in International Agriculture, formally established in 1963, has been designed to assist in alleviating hunger, strife, and obstacles to cultural advancement throughout the world.

"The arts, sciences, commerce and industry have flourished only in societies based on a vital, dynamic agriculture," Dr. Turk emphasized. "Few problems have greater priority than the provision of an adequate food supply of the right quality for the people of the world."

Although the green revolution has meant an upswing in food production in several developing countries, the problems of hunger and malnutrition have not been solved because of the rapid increase in population. The green revolution has only bought extra time in which to slow down the rate of population growth.

Demographic experts predict the world population will nearly double by the year 2000. Most of this increase will occur in the already low-income countries of Asia and in some areas of Latin America and Africa.

"These countries need assistance and leadership in improving their food production and in developing their land and water resources," Dr. Turk declared. "Many of them have serious difficulties with rural unemployment and income distribution. Food processing, food distribution and marketing cause additional problems."

Cornell professors and students from many countries work closely together to speed up agricultural development around the world.
Moreover, the developing countries lack the institutions and social and communications systems that encourage agricultural and economic development. The Program of International Agriculture at Cornell speaks to these critical issues in several basic ways.

First, undergraduate and graduate students from the United States and other countries are prepared to work in international education and research in agriculture. A strong program of basic and applied research in the essential agricultural disciplines such as soil science or plant breeding undergirds the curriculum.

In addition, Cornell cooperates with universities and research institutes located in other nations to develop human resources for leadership. From 1952 to 1960, the College worked with the University of the Philippines in a project to help rebuild its College of Agriculture, strengthen its experiment station, and train young Filipinos for roles of leadership.

A second Philippine program, from 1963 to 1972, was supported largely by the Ford Foundation. It concentrated on the further development and strengthening of graduate education and research in the Philippines’ College of Agriculture.

Furthermore, Cornell hosts seminars, workshops, and conferences regularly to evaluate and analyze problems. Publications and other media are used to communicate with students, professors, government, industry, and agricultural leaders.

“But this program is a two-way street,” Dr. Turk cautioned. “The knowledge gained and shared through International Agriculture not only benefits the developing countries, but also helps New York State agriculture.”

“For example, some of the germ plasm of the best crop varieties grown by New York farmers originated abroad, and many important breeds of livestock originated in Europe and the United Kingdom,” Dr. Turk added. “Cooperative research on potatoes with the International Potato Center in Peru, on beans with the International Center of Tropical Agriculture in Columbia, and on corn with the International Maize and Wheat Improvement Center in Mexico will have special significance for New York agriculture.”

The Program for International Agriculture is engaged in the battle to feed humanity. Sharing the costs are New York State, the Ford Foundation and other private foundations. The Federal government also participates through USAID research and training grants and contracts.

“We have a unique capability and resource base for worldwide research and training in agricultural development,” Dr. Turk said. “We can provide important leadership in helping food-deficient nations to develop their educational resources and to train people to meet their own food and fiber needs. From the viewpoint of the world community, this can be one of the greatest contributions the College can make to world stability in the decade ahead.” Dr. Turk concluded.

Sufficient food and higher living standards will enhance the chances for political stability in the developing nations. This is a significant route to world peace. And it is the challenge facing the Program for International Agriculture.
Getting the Weather Together

by PAM SMITH '74

If you receive a barometer for Christmas, you may get a little puzzled when you try to read it. Don't start a fight with your brother over whether it's going to be cool and dry or wet and warm, instead let the Division of Atmospheric Sciences, Department of Agronomy at Cornell University help you. Helping the public with many different questions and problems large and small about the weather and related topics is part of the many services that the Atmospheric Sciences Division at Cornell provides.

Miss Sharon Ditmars, statistical clerk at the Atmospheric Sciences Division in Bradfield Hall, is your "weathergirl" for the county and state. "The Atmospheric Sciences Division maintains six weather stations around the state," said Miss Ditmars. They are located on the Game Farm Road in Ithaca, at Mt. Pleasant, Aurora, Valatie, Canton and Chazy. Daily readings are taken from the Ithaca weather station and are recorded on observation sheets. The maximum and minimum air temperature at 60 inches off the ground and the amount of precipitation is given to the Ithaca Journal by Miss Ditmars daily. Each of the other weather stations sends daily observation sheets, humidity-temperature charts and precipitation charts at the end of each week. This information is then compiled with information from the Ithaca weather station.

At the end of one month, averages are taken for temperature, total monthly precipitation, average 3-inch and 60-inch air temperature, soil temperature at 4 inches and 8 inches into the ground, wind readings at 60 inches and 18 inches off the ground, evaporation readings and solar radiation readings. All of this information is punched onto computer cards and a printout is obtained which is the Division's monthly meteorological summary of the state. "The Atmospheric Sciences Division has provided this monthly summary for people for over 10 years," said Miss Ditmars. A mailing list of approximately 130 people includes people on campus, Ithaca residents, people around the state and out of state. These summaries are free and are available to anyone.

In addition to the monthly summary, the Atmospheric Sciences Division began a weather weekly summary in October, which includes approximately 80 weather stations within the state. These stations include co-operative stations, river rainfall stations, and first order stations such as those in Albany and Buffalo. All stations send in maximum and minimum temperature and precipitation readings. This information is punched onto computer cards and is read out by the computer into a weekly summary of ten divisions of the state. The computer also prints out two maps—one for total precipitation and one for temperature which gives the departure of the mean temperature from the normal.

All of the information is then compiled by Miss Ditmars into a weekly summary which is sent to the participating 80 weather stations, cooperative extension agents throughout the state, and to anybody else who would like them.

In addition to these monthly and weekly summaries, the Atmospheric Sciences Division, through Miss Ditmars, answers many questions that the public might have about the weather. "Our records are open to the public and they date back to 1895," said Miss Ditmars. Among the types of people who use the divisions services are consulting engineers who may want to know about Ithaca's rainfall and flood history.

Official forecasts are relayed to the public. For example, power and fuel companies call all during the year for the heating degree days for estimating heating oil consumption. If there are any unusual weather conditions or record temperatures, the area newspapers and radio stations call and ask for statistics. Often, insurance agencies call about claims problems. For example, if a man says his barn was damaged by hail on a certain day, the insurance company checks with the Division to determine weather occurring on that day. In the fall, many people want to know when the first frost will be, in the winter they may want to know how bad a blizzard will be and in the summer they may call about the length and severity of any thunderstorms that may be approaching the area.

The Division of Atmospheric Sciences at Cornell University always welcomes you and hopes that they can be of some help to you whenever you might need them—even if your problem is only a barometer that you can't figure out how to read.
Ithaca Weather: A Profile

If you've been in Ithaca long enough, chances are that you have experienced its unusual weather changes. One day’s weather in the fall or spring may consist of rain, sunshine, sleet and lightning. Because Ithaca is in or near the path of major weather systems that move across the nation, Ithaca’s weather is subject to this variety. Ithaca’s variation in topography also affects the weather.

In general, Ithaca’s summers are warm and its winters long and cold. Its climate features frequent and abundant snowfall from early or mid-November to mid-April. The climate also favors considerable cloudiness and rain. On the average there are about 175 cloudy days per year and 110 partly cloudy days leaving only 80 clear days in the year. Annual precipitation may range from extremes of 28 inches to 46 inches. Precipitation of one inch or more in 24 hours can be expected in any month. Two inches or more of rain per day are occasionally received during the warmer months. Thunderstorms occur on an average of 30 days per year and dense fog occurs about 10 days per year.

Some of Ithaca’s variable weather is pictured here.
Farm Study Courses. In 1925, a Farm Study Office was set up to handle the mounting paperwork — enrolling new students, gathering routine background information on students, forwarding lessons assignments to the instructors of the various courses, returning graded lessons to the students, issuing certificates of completion, and working with research extension specialists in developing new courses.

Students enrolled in the tuition-free courses through the Farm Study Office. The student had only to purchase a textbook to accompany each course, and pay the necessary postage fees when mailing in his assignments. Each course was divided into a series of lessons, as well as some practical exercises in which the student could apply what he had learned to real situations. With the completion of each lesson, the student would be forwarded the next lesson. Only one course could be taken at a time, with a time limit of one year. The only requirements for taking the courses were that students have at least a grammar school education and be residents of New York State.

The success of the Farm Study Courses continued over the 20’s and 30’s. It is estimated that between 2,000 and 4,000 people were reached each year. Such courses as “Farm Management I,” which dealt with “farming as a business, factors determining types of farming, diversified or specialized farming, size of farm as related to efficiency and profits, efficient use of credit, both in starting and in carrying on a farm business, methods of renting, choosing a region in which to farm, and choosing and buying a farm,” were open to and highly recommended for city people who were interested in the farming business as well as farming people with limited experience. Other courses were directly concerned with specific subject areas, such as Animal Husbandry — “Feeding and Management of Dairy Cows,” or “Sheep and Wool Production.”

The courses underwent a series of changes over the years. Some courses were combined, a few were expanded, and other courses were dropped due to lack of interest and participation. The existence of each course depended solely on the need and demand for the course.

The Farm Study Courses continued for over 30 years. However, during the late 40’s and early 50’s, there was a steady decline in enrollments. In 1955, a study was made by a Cornell graduate student, working with the Farm Study Office, to determine the advisability of continuing the courses. The study consisted of interviews with instructors, questionnaires sent to students, and an evaluation of the whole program in general.

The results of the study were discouraging. Because the Farm Study Courses were not an approved extension project as specified by the Smith-Lever Act, they were not a legal part of the New York State Extension Program. Therefore, there was no special place allotted to the courses within the program. Although some changes had been made over the years, the courses had not been kept up-to-date. Publicizing the courses in order to attract more enrollments did not seem feasible until the material could be updated. Extension specialists wondered if the courses were worth the extra time and effort required to get them back into shape. The lessons, which were corrected and graded on the most part by graduate students, were not being handled as efficiently as was necessary. Some lessons were returned to the student within a few days, others several months. The annual enrollment rate was now down to about 1,000 students, only 16 percent of which were full-time farmers. Thirty-three percent of the 1,000 students were found to be inmates of State penal institutions. While the courses were playing an important role in rehabilitating prisoners, (many, upon being paroled, went into farming) this was not the original intent of the Farm Study Courses.

The program had been started when communications were limited. This was no longer the case, and extension specialists felt the information contained in the Farm Study Courses could be obtained just as easily through other sources.

The study, though discouraging was thorough and informative. It recommended that the program be continued and suggested ways and means of revising the courses in order to effectively carry on the program. But personnel within the various departments did not have the time, money, nor the interest to devote to an extensive revision of the Farm Study Courses. And so, after more than 30 years, the courses were disbanded, with the exception of Home Gardening, (since discontinued) and Beekeeping. The Beekeeping course has been thoroughly revised and is still offered through the Entomology Department. The course is no longer tuition-free, however, and is only open to a limited number of students.

Now that transportation is no longer limited, magazines and newspapers are all too frequent, as are radio and television, many people today are “looking to the land” in order to escape the hectic pace of city life. Others in an effort to beat the high cost of living, are once again turning to full-time or part-time farming where they can watch their efforts take root and grow and enjoy that feeling of pride that comes with accomplishment. But many of these people are already busy earning livings in other areas besides farming. It’s just as hard today to leave one’s work and income to attend college classes. The Farm Study Courses seem an ideal solution for those who are perhaps dreaming, but who are nevertheless looking for a future in farming. There are several successful home study programs throughout the nation. Perhaps the Cornell Farm Study Courses were disbanded too soon. An extensive revision of the courses might have made them as beneficial to the people of the 70’s as they once were to future farmers of the 20’s and 30’s.
William R. Kunsela '39 (MS Ed. '46, Ph.D. '51) has been named first president of the newly established State University College at Utica–Rome. He served as President of SUNY Agricultural and Technical Institute at Delhi for 17 years. William F. Kennough '36 (MS '53) previously Delhi vice president, has been named president to succeed Dr. Kunsela.

Brad Donahoe '51, Elkhart, Indiana, has been named assistant vice president of Starcraft Co., with primary responsibility as Manager of Marketing and Sales of the Agricultural Products Division.

James McArdle, Sr. '36, of the McArdle Seed Company of Greenwich, Connecticut has been elected president of the Greenwich Chamber of Commerce. His son Jim Jr. '63, operates the MacMillen Flower Shop in Greenwich (a division of McArdle Seed Co.).

John J. Sullivan '62, LeRoy, N.Y. was selected for inclusion in the 1972 edition of “Outstanding Young Men of America.” John is president of Agri-Systems, Inc., Pavillion, N.Y., and is owner of John Sullivan Properties, Inc., including a registered dairy breeding herd. Previously he was in the farm department and the public relations department of the First Trust and Deposit Co., Syracuse, and was vice president and sales manager of the N.Y. Sealed Storage, Inc., Auburn. He is a life member of the Dairy Shrine Club, and is active in the Holstein Friesian Association of American and New York Association. He is president of the National Dealer Council, A.O. Smith Harvesstore Products, Inc.

Isadore Roy Cohen '48, is group vice president of S.B. Penick and Co., a division of C P C International Inc., New York City. Since graduation he has been involved in the antibiotic fermentation industry which produces animal feed additives. He is also active in the Animal Health Institute.

Carol Sacks Marcus '65, Memphis, Tenn. recently received her Ph.D. in Biochemistry from Duke University and is presently on the faculty in the Department of Biochemistry in the University of Tennessee Medical Unit.

Joseph E. Huth '53, Cooperative Extension agent in Albany County has received national recognition for his professional achievements. He received the 1973 National County Agents Distinguished Service Award from the National Association of County Agricultural Agents at its recent annual meeting. Huth was recognized for organizing a successful roadside marketing conference and an annual vegetable school for producers in New York’s Capital District.

John C. Swan retired from Cooperative Extension at Cornell University on September 30 after 31 years of extension field work and administration. The University Board of Trustees have designated him Professor of Extension Administration Emeritus.

On the staff of Cooperative Extension since 1942, Swan joined the staff of the N.Y. State College of Agriculture and Life Sciences at Cornell in 1955 after serving in the field for more than 12 years.

Milton L. Barnett, a specialist in agricultural development, has been appointed a full professor in the Department of Rural Sociology at the N.Y. State College of Agriculture and Life Sciences, Cornell University.

Until recently, he was an adviser to the Prime Minister of Malaysia and was Associate of the Agricultural Development Council, Inc. (ADC). On July 6, Barnett was honored by the King of Malaysia and his Prime Minister, Tun Abdul Razak, with the “Panglima Setia Mahkota” (Officer of the Royal Crown) presentation.

Barnett and his wife, the former Helen Denfeld are both Cornell alumni.

Scholarships Available

The George C. Ramlose Foundation has again made it possible for 100 people to enroll free of charge in “Food Warehousing and Transportation,” one of the courses offered by the Cornell Home Study Program in Food Industry Management.

When a similar announcement was made a year ago, the quota was filled so quickly that many companies were unable to take advantage of the opportunity. This year, Cornell Home Study will give first consideration to those who missed out before. To provide even more equitable distribution, only five scholarships will be awarded any one company, on a first-come, first-served policy.

For further information about the Ramlose Scholarships, write to The Home Study Division, 250 Warren Hall, Cornell University, Ithaca, N.Y. 14850.
Career Development—Building Successful Careers in Agriculture and the Life Sciences

In today's complex society, students in the College of Agriculture and Life Sciences need effective resources to help them select and prepare for satisfying careers.

The Career Development Program is designed to supplement the academic programs of the College by providing career information and opportunities for field experience. Using these resources, career oriented students can develop better total college programs and smooth the transition from college into successful satisfying careers. The resources of the Career Development Program are also available to alumni of the college.

The Four Phases of the Career Development Program

I. Career Exploration Resources
   - Career Library / Directories, guides, company literature, etc. are available as references.
   - Counseling Services / To supplement advisor counseling and other services available on campus.

II. Work Experience Programs
   - Co-operative Career Development Program / Allows students to integrate up to a full year of full-time work experience in their field into their undergraduate degree programs.
   - Summer Intern Programs / Summer training programs in business, government, etc.
   - Part-time and Summer Job Placement.
   - Farm Practice Classes and Placement / Instruction in basic farm techniques and placement assistance for students seeking farm experience.

III. Career Placement Services
   - Employer-Employee Referral / An organized effort to get employers and applicants together.
   - Job Opportunity Listing / A monthly listing of openings mailed to seniors and alumni seeking employment opportunities.
   - On-Campus Recruitment / Many employers hold job interviews through the Office of Student and Alumni Services each year.

IV. Alumni Services
   - All placement, counseling and other resources are available to alumni throughout their careers.

Allen W. Perry
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A Countryman Interview . . .
Dr. Loehr Discusses Environmental Program

At all levels of society, greater emphasis is being given to the solution of environmental quality problems. Emphasis is being focused not only on the technical but also on the social and economic aspects of environmental quality as societal costs increase due to pollution control and as industrialization replaces people with machines. Increasing leisure time and increased use of rural lands for recreational activities have permitted the public to become more concerned with broad environmental quality goals.

The College of Agriculture and Life Sciences through its educational, research, and extension programs has several responsibilities relating to environmental quality. It helps to meet basic human needs for food, fiber, and quality of living through the development of production, processing and marketing systems which minimize deleterious effects on environmental quality. Further, it is concerned with the enhancement of environmental quality through the orderly development and utilization of our natural resources and through systems of arranging and managing biological resources for man’s benefit.

In this interview, conducted by Robert J. Corey 74, Dr. Raymond C. Loehr, director of the College’s Environmental Studies Program directs his attention to a clarification of the program with regard to its organization, goals, and future direction.

Countryman: Unlike other programs in the College the Environmental Studies Program covers a large number of related disciplines to accomplish its purpose. Could you explain in some detail how the Program differs from other programs?

Loehr: Universities and colleges are organized as a collection of departments or programs representing discreet areas of academic interest oriented around identifiable disciplines. Many departments have concerned themselves with environmental matters, but generally only as the subject related to their discipline. The environment is very complex, a vast, mutually interacting system. Environmental studies involve not only science and technology but also humanities, law, and the social sciences. Proper attention to environmental matters requires an interdisciplinary approach, an approach that is difficult to accomplish within the normal administrative framework of a college, so a different approach was deemed desirable to ensure the necessary coordination of emphasis.

On July 1, 1972, the Environmental Studies Program was instituted in the College to insure continuing commitment to environmental quality matters and to provide a unity of leadership. The Program and the Director administratively are responsible to the Dean of the College and are functionally responsible to the College Directors of Resident Instruction, Research, and Extension.

The Environmental Studies Program itself is responsible for the continuing appraisal of the teaching, extension, and research functions of the College in the environmental quality area and can make recommendations for their improvement. It encourages interdepartmental collaboration and recommends action necessary to achieve it. If requested, it can recommend budgetary action to the College administration concerning environmental quality matters. In short, the Program is to critically analyze the College efforts relating to environmental quality and their interactions with efforts elsewhere in the University, the state, and the nation.

I want to make it clear that the Environmental Studies Program was not established to replace environmental activities within individual disciplines and departments. Such activities will continue to make important contributions to the total environmental efforts of the College. But, the Program was established to focus and integrate components of departmental activities on specific problems and to initiate action to meet needs that may not have been handled through more traditional approaches. The intent of the Program . . .
"The College has made a deep commitment to use its resources to meet the environmental quality needs of the State. The Environmental Studies Program has not suffered from any lack of interest or cooperation on the part of the Dean, Directors, or other members of the College administration."

is not to create new administrative structures but to cooperate with existing groups, Task Forces, and committees wherever possible.

In addition, I would like to point out that the purpose of the Program is not to carry out all environmental action or even to attempt to instigate such action. Rather, the purpose of the Program is to assure that such action is carried out and to see that the leadership, the framework, and to some extent, the resources for collective action are provided by the College. In other words, the Program is not at the top of a pyramid nor constructing an empire, but rather at the center of a network.

Countryman: What College resources are available to the ESP?
Loehr: Essentially all of the resources of the College are available to the Program. The College has made a deep commitment to use its resources to meet the environmental quality needs of the State. The Environmental Studies Program has not suffered from any lack of interest or cooperation on the part of the Dean, Directors, or other members of the College administration. Obviously, however, the needs and opportunities perceived by the Program must be developed in a logical manner to compete with the many demands on the finite resources of the College.

Countryman: More specifically, how is the Program organized?
Loehr: Operationally, the Program functions with a Program Director and small administrative staff, through a College Environmental Studies Committee and through Task Forces and committees. Each department in the College has a departmental environmental studies program leader. This individual serves as part of the College Environmental studies Committee and is the person the Program Director would normally work with on most Program matters. It is the responsibility of the departmental leader to keep the departments informed. He would be expected to encourage participation of the department and its staff on aspects of the Program and to seek opportunities for both intra- and interdepartmental activity on environmental matters.

The Task Forces are groups of people from many disciplines sharing a common interest in the solution of one or more environmental problems. Task Forces coordinated by the Environmental Studies Program include: Agricultural Waste Management, Agriculture and the Environment, Energy, and Land Runoff.

A Program committee is active in college curricula matters related to Environmental Studies.

Countryman: Can students major in Environmental Studies at either the undergraduate or graduate level?
Loehr: The Program does not offer academic programs leading to either undergraduate or graduate degrees. Many departments in the College offer programs of study which emphasize environmental matters. It is not the intent of the Program to establish degree programs in environmental areas but rather to work with each discipline to increase the environmental awareness of students in the discipline.

As you know, the curricula in the College are organized into nine broad program areas. Environmental Studies is one of these areas. A curriculum committee has been established in each area with major responsibility for coordination of student advising, identification of objectives and scope for each specialization, encouragement of curriculum improvement, and to provide guidelines for suitable courses and numbers of desired students.

Graduate students interested in environmental matters can choose a minor field titled "Environmental Quality." This minor is available for students who wish to broaden their knowledge in physical, chemical, and biological areas related to environmental quality problems and their control. Details about this minor can be found in the Graduate School announcement.

Countryman: The achievement of effective results when dealing with environmental problems demands cooperation at the grass roots level. Have you received this kind of support from New York farmers and agricultural industries?
Loehr: New York farmers and agricultural industries are well aware of the need to maintain satisfactory environmental quality while producing food for the public. Farmers are and have been among the nation's number one ecologists. They continually work with nature and understand the realities of the biological phenomena and the carrying capacity of the land better than most of the public.

The interest of farmers and agricultural industries in environmental quality matters is evidenced by the many requests reaching extension agents and specialists for such information. There is no evidence that farmers or agricultural industries are anti-environment.

Countryman: What role does Cooperative Extension play in these efforts?
Loehr: The major avenue of information transferred on environmental quality matters to the people of the state is through Cooperative Extension. The Agriculture and Environmental Task Force is an extension activity which is responsible for alerting agricultural producers to the interaction of production and the environment and to transmit information on environmental quality management to the producers. In June 1973, a two-day meeting
devoted to environmental matters was held for extension agents and specialists in the state and almost all attended. Items emphasized included the use of pesticides and fertilizers, waste management, land runoff control, noise, the visual environment and other items. Packets of detailed informational material on each subject were distributed for the use of each agent in transmitting the appropriate information to the farmers and agricultural industries in the state. The Task Force continues to develop and coordinate appropriate extension activities related to environmental quality.

Countryman: Does the Program only emphasize or focus on agricultural producers and industries?

Loehr: No, activities of the Program focus on the broad environmental quality needs of the people of New York. The approaches used to focus on these needs have been the extension agents and the Environmental Leaders Forum. Many extension agents work with communities as well as with farmers and need answers to a variety of environmental questions. Information from the Agriculture and Environmental Task Force and from other components of the College is available for those in rural communities, vacationers, and others not strictly associated with agricultural production.

The Annual Environmental Leaders Forum sponsored by the College was developed to assist decision makers at all levels with their concerns and to encourage interactions among public and private organizations, lay leaders, and state officials as they consider broad problems of public concern.

Many environmental subjects can be controversial and there is need for unbiased information on the various alternatives. The Forums and other public service activities of the College and the Program in the environmental area are intended to present both or all sides of an issue and to provide ample opportunity for consideration of various views.

Countryman: The word “environment” can mean different things to different people. What do the words “environmental studies” mean in terms of your program?

Loehr: In the Program, environmental studies are defined as studies of natural processes in air, land, water, energy, and life, and their interactions with each other and with man. The strategy for developing reasonable solutions to environmental problems requires a strong base of scientific, ecological, and technical knowledge, the ability to understand the natural environment, and the ability to estimate the effect of man’s interaction with the environment.

Environmental problems are largely a set of social problems with some technical solutions. Overall solutions to such problems must evolve from “people” oriented interactions such as occur in the legal, political and institutional arenas. Attempts to solve environmental problems which do not incorporate technical and social consideration will be inadequate.

Countryman: You note that one of the goals of the Program is to coordinate with similar activities in other institutions. Can you identify some of these coordinative activities?

(Continued on page 16)

Dr. Loehr explains organization and objectives of the Environmental Studies Program to Countryman reporter Robert Corey.
A loud hum greeted me as I entered the building. A sudden feeling came over me that I had just gone below into the engine room of a large steamship. Hearing footsteps behind me, I turned expecting to see a sooty stoker, but instead I found a neatly dressed engineer attending to the large refrigeration compressors at Cornell's chilled water plant.

Ten years ago this plant was first brought into operation. Then the load was light. The two 1200-ton centrifugal refrigeration compressors and four large water pumps had an easy job cooling the few buildings that were fortunate enough to be air conditioned. But because of increased demands for air conditioning in both the recently constructed buildings and in some of the more established ones, the plant is now overloaded even though more equipment has been added. About six years ago another 1200-ton compressor and two more water pumps were added, but these are not sufficient now to deal with the ever increasing demands.

What this plant does is chill a closed system of water down to 45 degrees. This cooled water is then pumped across campus to over twenty different buildings. In the individual buildings, the water is run through coils. Air is then blown across these coils by giant fans, thereby cooling the air in the buildings. The water, now about 55 degrees, returns to the plant to be chilled again.

Prior to this method of air conditioning, most of the water used for the different cooling systems was only used once and then discarded. This proved to be a tremendous waste of water. Furthermore, the filter plant used to purify this water couldn't keep up with the increasing demands. Therefore, the present method of chilled water in an enclosed system has shown to be a much more efficient method.

The chilled plant was built at its present site to utilize water from Beebe Lake to cool the three large condensers. This process has caused concern among environmentalists fearing that the water used to cool the hot condensers will raise the temperature of Beebe Lake, thus changing its present ecology.

Maurice Harris, chief of operations at the Department of Buildings and Properties, refutes this mistaken notion. "With one slight exception, the water used to cool the condensers is discharged back into the lake, and channelled directly over the falls." This one exception he referred to was a warm water recirculation system used in the winter. This recirculation system, contained in a small enclosed area, is designed to prevent a freeze-up. He goes on to say, "The increase in temperature is very minimal in regard to the total flow and any heat is dissipated into the atmosphere."

To avoid too large an overload at the Beebe Lake plant, two more similar plants are under construction. One of the new plants is being built just east of Morrison Hall. It is state-funded and will service the Vet.
College. The other system, located next to the Heating Plant on Dryden Road, has been designed to interconnect with the Beebe Lake plant. The Dryden Road plant will not service any new areas, but will relieve the overload of the original system.

Cornell's chilled water system was the first of its type to be operational. The success of this plant has caused numerous corporations and other universities to institute similar systems. But when you ask Ed Hartz, superintendent of utilities, what he feels is the key to the plant's success, he will tell you it is the advanced control center.

Simply what this very technical sounding control center does is monitor the entire chilled water system. From this one room at the plant, conditions can be determined at any or all of the serviced buildings. This enables the operator to pinpoint trouble spots without ever leaving the room. "I couldn't even begin to estimate the number of man hours this control panel has saved us, but it is some fantastic number," claims Hartz.

Leaving the control room, I walk back out into the hall to the whine of the pumps and the roar of the compressors.

Ecological Action: Cornell In Congress
by KAREN LIEBHABER '74

By all indications, the original "Earth Day" of 1970 was a success. But only for a short time. The goal of "Earth Day" was to alert the American people to the real and potential dangers of the deterioration of our environment. However, soon after the "Earth Day" activities and speeches had passed too many people forgot about ecology, conservation, and the threat of pollution.

Yet several concerned Cornell students and faculty members wanted to do something more effective; hopefully something to bring about long range benefits to many people. They wanted to accomplish something more than a temporary consciousness raising among the local people. What actions could they take in regards to conservation that would be influential and widespread enough as to have a lasting impact.

First of all, they recognized that Congress traditionally does not have access to the expertise that the Executive branch does. They therefore decided that a particularly effective action would be to offer to Congress, as a display of citizen concern, an ecological advisor. The group, Citizens for Environmental Action (CEA) which included faculty advisor Prof. Thomas Eisner of the Section of Neurobiology and Behavior in the Division of Biological Sciences, was able to raise approximately $14,000. They accomplished this through the sale of buttons, for 25¢ each, which said "Ecological Action Now." They also received larger donations from interested parties.

The Cornell group also received advice from the staff members of the American Political Science Foundation (APSF) in Washington, D.C. The Foundation runs the Congressional Fellows Program. Under the terms of the Cornell plan, a candidate would be selected who would spend a year as an ecological advisor to a Congressional committee in the Senate deeply involved in pollution control legislation.

Walter Westman, Ph.D. '71, was chosen to go to Washington, D.C. as Cornell's first "Visiting Scholar in Ecology". He worked as a staff member of Senator Edmund Muskie's committee on air and water pollution, a subcommittee of the Senate Committee on Public Works. Impressed by the success of the initial experiment, members of the House Public Works Committee (the counterpart of the Senate committee) asked if they might also avail themselves of similar expertise in drafting major pollution control legislation. Peter Jutro, a Cornell graduate student, was chosen to be Visiting Scholar in Ecology for the House of Representatives, helping to run the hearings of the Public Works Committee and prepare legislation.

The man who invited Jutro to Washington was John A. Blatnik of Minnesota, an ardent conservationist who had just become chairman of the House Public Works Committee. Blatnik, known to many as "the father of water pollution control legislation" had been fighting for clean water longer than anyone else in Congress.

When Jutro expressed a desire to return to Cornell he asked to stay in Washington as staff consultant to the House of Representatives. At that time it became obvious to CEA that a broader base of support would be necessary to continue the program. Of the many groups Westman, Jutro, and Professor Eisner dealt with, the American Association for the Advancement of Science (AAAS) expressed the greatest enthusiasm. Within a year and a half the AAAS had initiated its own fellowship program, based in large measure on the Cornell model.

Westman is now teaching biology in Australia; two other Cornellians have each spent a summer in Washington, and Peter Jutro is still serving as a Congressional consultant. He commutes between Washington and Cornell University, where he is pursuing studies and teaching biology.

Although the roles of the principals have changed, the basic purpose of the Cornell plan is being fulfilled. It has had long term effects, and the AAAS program is successfully underway.

The efforts, enthusiasm and assistance of these and other Cornellians in pointing out principles of ecosystem dynamics may have long term beneficial effects on the American environment.
Better Communications...
Channeling Information To The Public
by CAROL EPSTEIN '74

"About three years ago, there were a number of very drastic budget cuts to programs in the College. Since we feel that communication is pretty important in society, this stimulated us to try to think of areas in society that were very important - so important that work in those areas would be supported no matter how tough things got."

Associate Prof. Robert H. Crawford of the Department of Communication Arts thought of such an area - Family Planning.

The problems of over-population have been with us for over a century, but they are especially critical today. In 1650, a world population of .5 billion increasing at the rate of .3 percent annually meant that it took 250 years for the population to double. Growth was kept in check by hunger and disease. Today, the population of the world is 3.6 billion, and it grows by 2.1 percent each year. In 33 years, the population will have doubled again.

We are now facing an energy crisis - gasoline, electricity, and fuel oil are scarce commodities, prices are at their highest, and people are being forced to "do without" as never before. Clearly, the population problem can no longer be ignored.

Prof. Crawford began his attack on the population problem by assessing the facilities and personnel available at Cornell, and seeking means to start a program on a pilot basis.

"We decided to try to do whatever we could with resources on campus," he explains.

Professor Crawford established an informal advisory committee with others from the University who were interested in the problem. The committee consisted of Dean David Knapp of the College of Human Ecology; Prof. J. Mayone Stycos, director of the International Population Program; Prof. Edward Smith, former director of Cooperative Extension; Prof. Shirley White, associate director of Cooperative Extension; Prof. William B. Ward of the Department of Communication Arts; Associate Prof. Royal D. Colle, of the same department; and Professor Crawford.

The project, Communication Specialists for Population Affairs (COSPA), was not designed for direct action. There was no plan to operate birth control clinics or provide other direct services. Instead, the objective was to "try to develop or identify viable roles" through which Cooperative Extension could be involved in the area.

The first task was to identify a small group of county staff who saw needs and opportunities in their own area and were prepared to respond to them. Several agents answered the call and three counties, Cortland, Delaware, and Cattaragus, were chosen as pilot counties.

The reception has been very favorable, on the whole. There have been a few critical letters, and one "Right to Life" group in another state blasted the project, but Professor Crawford believes most of this is due to misunderstanding.

"We are not against life," he emphasizes. "We just want to make the information available so that people can make up their own minds."

Religious and community leaders sometimes have reservations, but these are usually resolved by careful explanations of the program and emphasizing that it is strictly voluntary. No one is urged to participate unless he or she really thinks it is an important thing to do.

"By and large you find them supporting it, but some of them do not," Professor Crawford relates. "We have come into contact with people who are leery of getting into this. Extension agents are afraid of how their county may react to their getting into such a program - private citizens are often more interested than professional staff."

The emphasis of COSPA is to identify and react to specific audiences. Examples would include: the lower class, which could benefit from patronizing family planning or health clinics; the middle class, which has less need for clinics but still often needs general information on population pressures, contraception, and other aspects; the taxpayers, who must be convinced that needed facilities are worth their tax dollars; and legislators, who need evidence of the demand for family planning facilities.

The project has developed many resources for use by community workers in informing people about family planning, and these are now being used throughout New York State and in states as far away as California.
"We began a sort of resource center for all New York counties," Professor Crawford says. "Some have not used it at all, while others have used it in different ways."

The resources are varied, and make use of many communication techniques. The committee has produced a notebook and study guide on "Population Affairs and New York State" for use by county Long-Range Planning Committees, an educational kit containing programs on human sexuality, and a catalogue of materials which can be supplied by Cornell for local exhibitions on family planning. The catalogue includes a list of faculty members who are ready to offer their time as lecturers and consultants to local family planning organizations.

COSPA has also prepared materials designed to help train paraprofessionals to provide information about family planning, four displays on the subject which may be borrowed by local agents, and cassette tapes with a variety of approaches. One of them has 30 minutes of general information and 30 minutes of blank tape, to be used to record local information. Five films on various aspects of population affairs are also included in the project resources.

Like any project in its developing years, COSPA has had financial problems. The initial program started with $13,000 — money scratched together from people around campus with an interest in family planning. A part-time field director and secretary were hired. Workshops were started to inform community workers on the operations and resources of COSPA. For the purpose of the workshops, the areas of information were broadened to include human sexuality as well as family planning. The workshops were very popular; some would-be participants had to be turned away.

One of the most fortunate results of the workshops was the subsequent involvement of 4-H with COSPA activities. Several 4-H agents had participated in the sessions and found that the program responded to many of the needs in their own counties. Their main interest was in training agents to work with young people in the area of human sexuality, including such topics as human physiology and sex roles in society.

For a second six-month pilot phase, COSPA was funded entirely by Cooperative Extension with 4-H funds, but last June these funds ran out. It was time to pause for evaluation and to plan for the future.

"We don't want another pilot project," says Professor Crawford. "We feel that we've proved that the need is there, that there are several viable roles for Cooperative Extension, and that both county staff and lay people want the program. Now we want to find a way to develop it as a regular ongoing program."

Application has been made to the U.S. Department of Agriculture for funds for an expanded three-year program. In the meantime, operations are continuing on a limited scale with funds from the College of Human Ecology.

Apart from its benefits to New York counties, COSPA has created new opportunities for students of communication. Graduate students in the Department of Communication Arts may put their ideas into action in creating new resources.

For example, one student is currently designing a program for high school girls which will include recorded conversations on female health, basic physiology, nutrition, hygiene, and birth control. Another student is preparing an experimental course on women's roles for use in high schools.

If the program can be continued, Professor Crawford says, "Our target for the next three years will be reaching half of the counties in New York State. So far, we've gone a long way with really minimal funding. One way or another we believe a way will be found, because this is an idea whose time has clearly come."
Plants As Art Elements

by PHILLIP S. TRESCH

Plants are an integral part of either a man-made or natural landscapes, and they can also be treated as individual art elements. Abstracting art from everyday scenes is an enjoyable activity that anyone can pursue.

Winter is an especially good time for finding beauty in nature due to the stark contrasts provided by the brilliance of snow as a backdrop and less foliage to emphasize the plant forms.

A winter walk through one of your favorite parks or hiking trails may well provide you with more aesthetic beauty and peaceful serenity than you might expect.
Ornithology Lab...

Where Birds Are Studied

by ANNE RABUSHKA '74

There's a part of campus most Cornellians never visit and many do not even know exists. Located in a secluded spot, a short way from route 13 and the Tompkins County Airport, is the Laboratory of Ornithology and bird sanctuary in Sapsucker Woods, the nation's first research laboratory for the study of living birds. Today, numerous projects take place within its facilities, from the classification of small song birds to the breeding of much larger birds of prey. Many of the experiments and programs initiated here, both scientific and cultural, have gained prominence throughout the nation.

The Cornell Laboratory of Ornithology, as opposed to other departments of the University, is almost entirely self-supporting. It obtains the majority of its funds from private donations and the sale of bird-related articles most notably the world famous bird records and numerous publications.

An annual book, The Living Bird, is described by Dr. Samuel E. Weeks, Assistant Director of the Laboratory, as "the Scientific American of the bird world." This year will mark the twelfth anniversary of the book which according to Dr. Weeks, "fills a real need in the scientific community. It is a resource for any ornithologist, yet is written so that the layman can understand it."

The laboratory sells other merchandise, including such products as audio cassettes, Kodachrome slides, bird puzzles and fine art prints.

The most interesting aspect of the Laboratory of Ornithology is the birds themselves. The Lyman K. Stuart Observatory, headquarters of the laboratory, looks out upon Sapsucker Pond and Woods. There are four and a half miles of trails, running through several different habitats in this area from which over 200 different species of wild birds have been spotted. During the winter months one can watch from the warmth of the

Peregrine falcons are among the many different kinds of birds studied at the Laboratory of Ornithology.

Observatory, the formation of mating pairs and the courtship rituals of Mallard ducks on Sapsucker Pond. Several telescopes in the Observation room assist in viewing distant sections of the sanctuary.

The Laboratory's most famous project to date involves the breeding of Peregrine falcons in captivity and the eventual restocking of these birds in areas where they are endangered or extinct. Prof. Tom J. Cade, the Peregrine Project Director, reports that the "first goal has been to develop a self-perpetuating captive population of Peregrines on a scale large enough to provide a continuing supply of birds for scientific studies."

The problem with this goal has been getting the birds to mate in captivity. Artificial insemination proved unsuccessful although it had worked for other birds of prey. It was soon found that captured adult pairs do not produce fertile eggs but that eyasses—birds taken as nestlings—are successful. By removing the eggs from the nests, additional clutches are produced by the mating pairs. This naturally occurring defensive reaction against depopulation can be used to advantage artificially.

During the past year three fertile pairs of Peregrine falcons produced 20 young in a total of eight clutches. Professor Cade predicts, "When we have 30 such pairs, we can produce 200 or more young Peregrines a year for restocking programs and other purposes. The significance of that number takes on real meaning when
one stops to reflect that 200 young represent more than the natural, annual production of the entire population of anatum Peregrines that used to nest east of the Mississippi River before the era of DDT.

These are multiple reasons for this unprecedented success in falcon breeding, previously thought to be impossible. Foremost has been the selection of compatible breeding pairs. Mark MacLeod, assistant research technician, explains that when a female falcon is too possessive of her cage and aggressive against an introduced male she is removed from her "territory" for several days. During that time the male can grow accustomed to the cage and the female can become more passive. Hopefully when the two birds are reintroduced, they reach a peaceful (and amorous) coexistence. If, however, the pair is completely incompatible, they are separated and new mates are selected.

Other reasons for success have been the large cages (two stories high), the relative seclusion, and the lack of human contact (all observation windows are of one way glass). The cage structures—which include high ledges and gravel—imitate the birds' natural habitat. When all conditions are favorable, the falcons may very likely form lifetime mating pairs. These pairs will be important once the restocking program gets under way and birds are returned to the wild.

James D. Weaver, Technical Associate of the Peregrine Program, has done much to bring breeding pairs of falcons together at the Cornell facility. A well-known falconer, Weaver has been the liaison between scientist and bird-fancier. Several Peregrines have been donated to the program through his influence and Weaver is trying to persuade other owners to board their birds at Cornell during the breeding season. By an interesting quirk of nature, moulting (a time when falconers do not fly their birds) and breeding seasons coincide. Therefore, the boarding arrangements should not inconvenience either group.

The relatively quick demise of this majestic species has been of concern to both falconers and scientists. The principal cause for the decline of these and several other birds of prey during the past few decades has been the overuse of DDT. By eating high on the food chain, these carnivorous raptors were subject to concentrated doses of the harmful pesticide. In the Peregrine this caused egg shell thinning and a decreased survival rate. (See box story).

Dr. David Peakall of the Section of Ecology and Systematics, studied egg shells collected over a 25 year period and explained the chemical mechanisms of this process. Though a Ph. D. in chemistry, he has put much of his time into ornithological studies, as many other Cornell professors have done. Prof. William Keeton, and Prof. Stephen Emlen, both Neurobiology and Behavior, are studying facets of bird orientation and migration.

The Laboratory of Ornithology houses several other types of birds besides falcons: for study, for recuperation from injury, for lack of any other home, or for food production. One whole room in the Hawk Barn is filled
with young chickens and quails, generously supplied by the Poultry Science department. These birds are killed at an early age, then frozen and finally used when needed to feed the falcons.

The Ornithology Laboratory is also an emergency ward for sick, wounded, and homeless birds:
- A Red-Tailed Hawk was brought to the lab in early November after having been shot and temporarily blinded in one eye. The blood clot has drained but the bird, now accustomed to humans, is somewhat tamed and refuses to leave. The raptor researchers are planning some reconditioning training for his return to the wild.
- A young mute swan was sent to Cornell from New Paltz at the end of the summer after having swum through an oil slick. The bird was cleaned with a super detergent solution. Dr. Weeks claims that the lab is now "all prepared for a freighter to break up on Sapsucker Pond."
- In late 1972 a Great Blue Heron was injured before it could make its flight down to Florida. After his recovery the Lab personnel found him a ride on a man-made bird — Eastern Airlines flew him down to Florida as a Christmas present.
- The Laboratory is presently boarding several eagles (two African Hawk Eagles and a Tawny Eagle), the property of a graduate student who hasn't found a place to keep them yet.

Along with its collection of live birds, the Laboratory of Ornithology has the largest library of natural sounds in the world, of which a great majority are bird calls. The segments on the Cornell bird song records all come from the collection. Researchers may send in for tapes of any specific sounds they may need for experiments and projects. Dr. Weeks has his own special project; he records a weekly radio show entitled "Know Your Birds." It is broadcast each Saturday morning at 9:15 on WHCU Ithaca.

This Cornell laboratory also serves as the headquarters for the North American Nest Record File which was begun in 1965. Dr. Peakall, coordinator of the program, is in charge of collecting, processing, and storing information on the nesting biology of birds. Approximately 800 observers all over the continent send in "report cards" on nests they have found. The collected results, which include nest size, type, location, and number of eggs, are put on computer tapes. This information is available to any interested party, be they scientist or layman.
Dr. Weeks says, “Of and by itself the program is not overly important. But when tied in with two studies by the Federal government — the National Bird Census and the Banding Program — it creates a highly effective environmental monitoring system. The longer it runs, the more important it gets.” With a combination of the three programs one can tell relative bird movements between areas and population growth and extinction rates.

Dr. Weeks points out that the program gets much of its information from laymen as well as scientists. “Ornithology is a field in which schooling is not necessarily a prerequisite. Much of our data collection has been done by interested amateurs.”

Interested amateurs in search of more technical and theoretical data, can subscribe to a home-study course in Ornithology put out by the Laboratory. There are presently 900 people enrolled in the course which costs $88. The curriculum format consists of nine seminars written by leading American ornithologists with question and answer sheets at the end. Each answer sheet must be returned before the subsequent seminar is sent out and after the ninth seminar, the participant receives recognition for completion of the home-study course.

The Laboratory of Ornithology, besides being a place of learning and research, is a cultural center as well. Paintings by Louis Agassiz Fuertes, a famous Ithaca artist (his paintings were used for the bird cards in the Arm and Hammer Baking Soda boxes), are on permanent exhibit as are collections of stuffed birds and paintings by other artists. Temporary exhibits by noted bird artists can be found here too. Starting on December 4th and continuing for two months will be a showing of the prints of Peter Parnall, a much acclaimed bird and wildlife illustrator.

The Ornithology Laboratory at Cornell University integrates all aspects of bird study, from art to research. In so doing they show the bird to be a needed and appreciated member of the animal kingdom. As Dr. Weeks says, “Birds are a sensitive and visible indicator for the health of the ecosystem. Organisms such as mold or field mice are not quite as easy to view or study in the wild. With birds we can determine their nesting pairs, we can band their young, we can listen to their calls, and we can count them. Complicated behavior and population patterns can be recorded. We can learn about the environment around us from our studies of birds in the area.”

From Black-capped Chickadees in Sapsucker Woods, to Mallard ducks in the pond, to Peregrine falcons in the Hawk Barn — the work of the Cornell ornithologists extends in many areas. And people in many areas are assisting in the work of this Cornell facility which welcomes and encourages such participation.
DDT Breakdown Observed

by PETER SNYDER '75

More than a decade has passed since Rachel Carson wrote her monumental Silent Spring warning of the impending dangers of the use of DDT, or dichlorodiphenyl-trichloroethane as science calls it. In that time scientists, environmentalists, and concerned politicians have lobbied together to enact legislation banning the use of DDT in the United States. The ban has been in effect for about three years, yet a problem connected with the chemical has remained to plague all living organisms. This problem is the "indestructible nature" of DDT.

Enormous amounts of DDT have been used in the United States and continue to be used in developing countries where it is essential to control insects that carry germs causing diseases harmful to man. Yet, essentially nothing is known about how this insecticide is destroyed by nature. That is until recently.

Studies here at Cornell in the Department of Agronomy have reported the first known complete breakdown of DDT by microorganisms. The studies have provided the outline of a specific biochemical pathway used by bacteria to totally destroy this pesticide. Further work by Dr. F. W. Juengst, R. V. Subba Rao, and Prof. M. Alexander is concerned with establishing the steps in the biodegradation in the laboratory and factors affecting the transformation in nature.

Simply stated, DDT is a large molecule made up of two benzene rings. What has been found is that two different types of microorganisms alternately break each of the rings. One particular kind of bacterium, Hydrogenomonas, breaks the DDT molecule into a compound called para-chlorophenylacetic acid. This chemical in turn, is completely broken down by another microorganism called Arthrobacter.

Since DDT is degraded by microorganisms in the laboratory, then why is the ring-cleavage process so slow in soil and water? After all the two microorganisms are common bacteria abundant in nature.

One possible explanation offered by Professor Alexander is that the organisms carry on a process of co-metabolism. This is the ability of a microorganism to metabolize a substrate that it cannot use as a source of energy or of one of the elements contained in the molecule. Since the bacteria doesn't benefit by metabolizing DDT, why do they do it at all? This Alexander can't answer, "It's just another quirk of nature, why does man still have an appendix? After all it has no useful function."
Cornell University recently dedicated one of its bioclimatic laboratories in memory of the late Prof. A. Watson Dimock in a special ceremony.

Located on Tower Road adjacent to the Virology-Nematology Laboratory across from Morrison Hall, the facility was named the A. Watson Dimock Environmental Control Laboratory.

Dimock was a faculty member of the Department of Plant Pathology at the N.Y. State College of Agriculture and Life Sciences, Cornell, for more than three decades until his death in 1972.

He was a world-recognized leader in the development of environmental control chambers, popularly called growth chambers, in which environmental conditions such as light, humidity, and temperature can be manipulated at will for research dealing with plant growth and plant pests.

Friends, associates, former students, and representatives of the ornamentals industry as well as many Cornell faculty members were on hand to pay tribute to Dimock.

Among participants were Mrs. Dimock, of 91 Ellis Hollow Creek Road, and three of her four children, Douglas, Thomas, and Mrs. Kenneth (Anne) S. Gumaer, all of Ithaca.

As a continuing memorial to Dimock, the occasion also marked the inauguration of the Dimock Lectures, a new lecture series established through the Dimock Memorial Fund under the auspices of the Agricultural Fund of the College.

Prof. Kenneth F. Baker, a plant pathologist at the University of California at Berkeley and a long-time associate of Dimock's, delivered the first Dimock Lecture in the evening in Morrison Hall, discussing the present status and concepts of biological control of disease-causing organisms in plants.

During the dedication ceremony held in the afternoon, Dimock was eulogized as an educator, scientist, and horticulturist, and for his contributions to Cornell, to the science of plant pathology, and to the ornamentals industry of New York State and the nation.

W. Keith Kennedy, dean of the College of Agriculture and Life Sciences, was the first to pay tribute to Dimock, and praised him as a loyal and dedicated scientist and teacher.

Charles E. Palm, the Liberty Hyde Bailey Professor of Agricultural Sciences and former dean of the College, said that "it is fitting indeed that we recognize him today through this dedication...a living reminder of his contributions to us and those plant scientists who will follow him at Cornell."

"I shall always remember Wat Dimock, his quiet manner, his friendly smile, his great spirit as a cooperator and leader, his selfless interest in providing contributions for all of his colleagues. He was a true friend and a great humanitarian," Palm said.

Prof. George C. Kent, now coordinator of planning and development for the College, who worked closely with Dimock for many years as head of the plant pathology department, called Dimock an internationally recognized leader in the development of growth chambers.

Tracing the pioneering work done by Dimock, Kent said that bioclimatic control chambers designed and constructed by Dimock have become a vital research tool for studies of effects of environmental conditions on plant growth and plant pests.

Other speakers were Prof. Joseph F. Metz Jr., acting director of research of the College, Prof. Kenneth F. Baker of the University of California and J. L. Brookins, president of the New York State Flower Industries.

Born in Middleboro, Mass., Dimock received degrees from the University of California at Berkeley and joined Cornell in 1938 after serving three years as assistant plant pathologist with the Division of Forest Pathology of the U.S. Department of Agriculture in San Francisco.

He was a specialist in the diseases of many commercially-grown flower crops, the epidemiology of plant diseases, and the nature of soil-borne diseases.

In addition to his work on the development of plant growth chambers, Dimock was a pioneer in the use of disease-free plants, especially chrysanthemums. With other Cornell scientists, he developed a team approach to extension work with florists, a method now used nationally.

In a bioclimatic chamber designed by the late Prof. A. Watson Dimock, former plant pathologist at the N.Y. State College of Agriculture and Life Sciences, Mrs. Dimock, W. Keith Kennedy (right), dean of the College, and Prof. Durward F. Bateman, chairman of the Department of Plant Pathology, examine oat plants used in research dealing with virus diseases. The plant pathology laboratory has been named the A. Watson Dimock Environmental Control Laboratory in honor of Dimock, who served on the faculty for 34 years.
Alumni Association Honors Retiring Faculty

The Alumni Association of the College of Agriculture and Life Sciences honored the retiring faculty members of the College at their 1973 annual Alumni Breakfast. The event took place at the North Campus Student Union during the University’s Reunion Week with 128 in attendance.

Those recognized, with their departments and years of service, were as follows: Nyle C. Brady, Agronomy (47-73) Head (55-65), Director of Research (65-73), Associate Dean (70-73); W. Dale Brown ’40, Extension Administration (65-73), County Agent (43-65); John C. Cain, Promotology and Vitcul.-Geneva (46-73); Harold E. Carley ’39, Extension Administration 4-H (59-73), County Agent (43-59); Randall K. Cole, Poultry Science (35-73); John F. Corman ’36, Floriculture and Ornamental Horticulture (36-73); Louise J. Daniel, Biochemistry (45-73).

Also, Arthur F. Durfee ’40, Extension Administration (46-72); John Einset ’38, Pomotology and Vitcul.-Geneva (44-73) Head (60-71); Orval C. French, Agricultural Engineering (47-73) Head (47-71); John W. Layer ’51, Agricultural Engineering (56-72); Francis A. Lueder ’31, Communication Arts (42-73); A. Frank Ross, Plant Pathology (46-73), Acting Head (53-54); Bernard V. Travis, Entomology (49-72) Head (70-72); Harold H. Williams, Biochemistry (45-73) Head (55-64); Carlton E. Wright, Extension Administration (48-73).

Dean W. K. Kennedy spoke briefly to the group regarding activities at the College, including changes in the College staff at that time. He announced that Dr. James W. Spencer, previously vice director of Extension, would become associate dean on July 1, replacing Dr. N. C. Brady who became director of the International Rice Research Institute in the Philippines on that date. He also recognized Dr. David L. Call ’54, newly named director of Extension.

Joseph P. King ’43, general chairman of the College of Agriculture and Life Sciences Fund reported that the Fund had exceeded the $1,000,000.00 goal established three years ago, with a total at that time of approximately $1,130,000. He announced also that because of the continuing need for additional resources for scholarships and innovative programs and the strong interest of alumni the Fund Advisory Committee recommended that the Fund continue on a permanent basis.

A report was given by Clifford F. Luders ’38, Alumni Association first vice president on Association activities during the past year. A summary of these include: College Open House, November 1972, 160 high school students attending from 33 counties; presentation of Alumni Awards to junior and senior with highest average for two and three years respectively; Annual Meeting, March 22, 1973, with 200 plus in attendance, and Association membership stands at approximately 1,200.

Survey Entomologist Named At College

David Sliwa, a professional entomologist with experience in international agriculture and the Peace Corps, has been named a “survey entomologist” at the N.Y. State College of Agriculture and Life Sciences, Cornell University.

This new appointment represents a joint effort by three agencies with responsibility for pest control and maintaining environmental quality, the N.Y. State Department of Agriculture and Markets, the U.S. Department of Agriculture’s Animal and Plant Health Inspection Service, and the College of Agriculture and Life Sciences.

Sliwa will be responsible for coordinating the efforts of these agencies. He is also expected to use a variety of modern tools, such as computer technology and air photography to detect, predict and estimate insect losses. It is generally believed that the use of pesticides could be greatly reduced if predictive capability is improved.

As the College’s survey entomologist, he will also compile a weekly report on insect conditions in New York State for extension agents. This account will be incorporated into the national insect reporting effort.

PICTURE CREDITS

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Alumni Honored

Six alumni of the College of Agriculture and Life Sciences have been recognized in the 1973 edition of Outstanding Young Men of America. Nominations for this recognition were submitted through the College Alumni Association, which extends its heartiest congratulations to these individuals.


Donald S. MacVean '60, R.D. 1, Lacona, New York 13083. Cooperative Extension Agent — 4-H Division Leader and County Administrator, Oswego County; 1973 — Statewide Program Leader — Community Development Programs for Youth — Cooperative Extension, Cornell University; 1962 — Cooperative Extension Agent — 4-H Division Leader, Oswego County; 1960-62 — Cooperative Extension Agent — 4-H Division, Nassau County; 1962 — New York State Association of 4-H Agents, Vice President; 1962 — National Association of Extension 4-H Agents, Vice Chairman, Distinguished Service Award 1971.

Laing E. Kennedy '63, Ithaca, New York 14850. Assistant to Dean, New York State College of Agriculture and Life Sciences; 1970-72 — Cooperative Extension Agent — 4-H Division Leader, Tompkins County; 1965-70 — Cooperative Extension Agent — 4-H Division Leader, Genesee County; 1965-72 — 4-H Agents Association of New York State — President, Western Region.

Joseph D. Peck '60, R.D. 1, Saratoga Springs, New York 12866. Self employed dairy farmer; 1960 — Saratoga County Farm Bureau — President, Vice President; 1968 — Town of Saratoga Planning Board — Chairman; 1969 — Outstanding Young Farmer Award — Saratoga County.

College Receives Gift Of Cattle

Dean W. Keith Kennedy of the College of Agriculture and Life Sciences has announced a gift of 11 head of Santa — Gertrudis Cattle. The cattle were given to the College by the Chaparroso Ranch in Texas. The Chaparroso Ranch is owned by Cornell University Trustee B. K. Johnson.

The herd is made up of 10 females and one male.

Dean Kennedy said that the College is delighted to receive these animals from such an outstanding Santa — Gertrudis Ranch. The Dean went on to say that the Santa — Gertrudis breed is adapted primarily in warm climates and that it will be interesting to see what changes will take place as we incorporate these animals in our breeding and nutritional experiments. The results of these experiments could have international implications, with regard to animals adapting to a variety of climates.

Harold L. Hawley '36, Weedsport, New York was recently honored by the New York Farm Bureau through presentation of their Distinguished Service Award at their Annual Meeting in November. He had previously served as the organizations vice president for several years.

Charles H. Cuykendall '62, has recently been named Branch Manager of the Hornell Branch of Security Trust, Inc. of Rochester, New York. Mr. Cuykendall was previously assistant professor and extension economist at the Institute of Agriculture, University of Minnesota.

Peter E. Smith '66, Trumansburg, New York has recently joined Babcock Industries, Inc. as marketing assistant on the Babcock International Corporation staff. Smith recently completed graduate studies at Cornell in Agricultural Economics.

David J. Nolan '49 (MS-51) was recently named state director of Farmers Home Administration, Syracuse, New York. He was previously affiliated with Telmark Division of Agway, Inc.

Cornell Senate Elections Feb. 19-21

The Cornell University Senate elections will be held over a three-day period, February 19, 20, and 21. This year each college will have a single voting place, and students will only be able to vote in their college. Polls will be open from 8:00 a.m. to 5:00 p.m. on these days. Agriculture students may vote in Mann Library during this time period.
Our Environment: Everybody's Business

The New York State College of Agriculture and Life Sciences is meeting the challenges of environmental improvement through a variety of programs, projects, events, and activities. These are being coordinated primarily through the Environmental Studies Program, an interdepartmental, interdisciplinary effort focused on these objectives:

- Organize College programs that relate to environmental quality goals.
- Increase College's capabilities in the environmental studies area.
- Foster departmental commitment and involvement in environmental matters by delegating program authority to a departmental leader.
- Encourage faculty interest, research, and educational activities in environmental concerns.
- Coordinate best use of available human, financial, and space resources and assist in finding additional resources to solve environmental problems.
- Unify the College's commitment to environmental improvement through a program administrator directly responsible to the Dean of the College.
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Take a Cornell student. Add the student to the staff of an upstate New York newspaper for one week. Mix thoroughly, then remove. You’ve got a student who’s had the best possible learning experience and a simply fantastic time.

You read a newspaper over a cup of coffee. What went into getting the paper out for you to read is irrelevant unless newspaper work is going to be a part of your future. During the week of Jan. 21, The Geneva Times, a daily newspaper published at Geneva, New York, helped me decide if journalism is, in fact, a career opportunity.

I’m a sophomore majoring in communication arts, a department in the College of Agriculture and Life Sciences. The Geneva Times participated in the College’s experimental Student–Alumni Contact Program, whereby alumni sponsor undergraduate students for a glimpse of the work in their fields. Three staff members of The Times’ newsroom graduated from communication arts: Wire Editor David Stewart ’69, State Editor Charles Wilson ’69, and Regional Reporter Karen Stone ’71. The managing editor, D. C. Hadley, is also a Cornell alumnus, graduating with the class of 1952.

The week started off less than full steam. Charlie Wilson met me at the airport in Syracuse Sunday evening to drive me to the home of Mr. and Mrs. Dave Stewart where I was to stay. The icy roads were totally tractionless, and the traffic was polymeric. To complicate matters, the car was filled with less than a tank of gas. During the entire slow-moving ride to Geneva the red warning light shone threateningly.

When we reached Geneva, the pace quickened considerably. Charlie and Dave gave me a rundown on their responsibilities at The Times. They showed me recent copies of the paper and pointed out the pages they each put together. Dave’s wife Pam took out a smile-provoking collection of fall and spring weekend fraternity pictures. Charlie and Dave had been fraternity brothers and, as compared with the present, startlingly shortcropped in their collegiate days.

I left with Dave the next morning for The Times’ offices, a five minute drive. The hour editors enter the doors is the only aspect that marred my days. Seven a.m. is an hour earlier than Cornell’s first scheduled class and several hours earlier than I enjoy greeting the day. Otherwise pushing open the doors opened to me an excitingly worthwhile combination of work and play.

“I think you’re going to find the newspaper more prosaic than you imagined it to be.”
“The policies and practices of the newspaper had come alive for me as I observed the staff in flesh and blood portrayals of reporting and editing under deadline conditions. I had been thrust into the excitement of personally covering events. Crossing over from the classroom was not as difficult as I had built it up to be.”

Mr. Hadley called the editors together for their daily informal meeting. I was invited to join them around the conference table as he outlined the successes and failures of Saturday’s paper. In turn, the editors volunteered stories they had lined up for the day, in terms of news, features, and sports on the local, state, national, and international levels. It was interesting for me to be a part of this brief policy discussion. I, of course, had no stories to volunteer.

As the editors finished stories, they brought them into the composing room. I watched how after being “typed” the resulting punch tape is fed into a “computer” which slides out the printed copy. After checked by the proofreaders and corrections made, the articles are waxed and fitted onto “dummy” pages. They are then arranged on the page so as to be esthetically pleasing as possible, leaving a certain amount of white space to ease the eyes. This is called the layout or make-up stage.

In the camera room, pictures are taken of the completed pages, which are run through a machine and cleaned. In a process which is still not entirely clear to me, the copy is transplanted onto an aluminum sheet which is then “oiled” and curved to fit on the photo-offset press. However, I did understand the principle of “water and oil don’t mix” by which the press works. In a two-step operation, the positive image on the newsprint becomes negative on the rubber roll and positive again on the paper, which comes out in its final form.

The circulation manager, head of the department that includes packaging the newspapers for delivery, gave me a geography lesson on upstate New York using the coverage map on the wall. The city of Geneva is located at the bottom of Seneca Lake. It is roughly 45 miles east of Rochester and 45 miles west of Ithaca, with Syracuse and Albany further east. This lesson was one of the most valuable, because if I knew a little about journalism, I knew virtually nothing about the upper half of my home state. The Geneva Times serves principally four of the State’s 62 counties, Geneva’s county of Ontario, plus Seneca, Wayne, and Yates.

I was a luncheon guest of the owner and publisher of The Times, Samuel Williams, along with his wife, Mr. Hadley, and a prominent local businessman-educator. The level of conversation was so down-to-earth it was disappointing in a way. Mr. Hadley kept his promise, and I was back from lunch in time to see “the press run” – the actual printing of the newspaper. It’s an impressive event right there on the premises, and it should have begun at 1:30 p.m. But Monday was the first day they’d run late in many months, making me wonder about the efficiency of my presence. However, I was told it indicated the difficulties that even an experienced staff is plagued with occasionally.

The press run is an hour and fifteen minutes, then The Times is ready for before dinner perusal. With the paper out of their hands, Charlie and Dave proceeded to chauffeur me around the city of Geneva. In between viewing landmarks, we discussed Cornell’s housing shortage and the log cabin I kiddingly said I was planning to build on the ag quad.

Dave’s first mental deadline is 8:00 a.m. – when Associated Press wire copy must be scanned. Next on his agenda is the United Press International pictures. Stories and pictures must be sorted and according to what he wants to use and where he wants to use them. I was impressed with the scope of Dave’s power, as every selection he makes is an editorial decision. There is not even a moment for a second judgment. As Dave said, “You have to be accurate and quick.”

By 10:00 a.m. the “dummy” for Page 3 is into the composing room. Page 2 follows at 11:15. Dave determined the appropriate picture sizes and cutlines or captions. He typed the headlines while I piped up with suggested words. As he relaxed, I asked him how it felt to deliberately eliminate certain articles due to lack of space. He replied, “Cutting stuff can blow your mind but you get used to it. When I started here I was frustrated because not everything I thought important – analyses, features – got into the paper.”

Dave cannot relax for long, but there is no visibly stressful tension, except as deadlines approach. The
thirteen people in the newsroom are self-contained units at their desks, laughing, telephoning, typing. They are a comparatively young staff to be overseeing what the people of Geneva will read in their newspaper. The publisher himself is in his thirties.

Hobart and William Smith colleges are in Geneva. I had my first jeep ride in traveling to the campus with *Times* photojournalist Thom Lamond, who is also a practicing Episcopalian priest. Thom was doing a piece about clergymen in the area who had preached on Watergate from the pulpit. I was deposed in an office to collect material on an upcoming lecture by a Syracuse University professor at Hobart College. Afterwards, while learning the darkroom processes from Thom, he told me, "The Times has a commitment to excellence which is rare in small-scale papers."

Thom gave me some clippings to read overnight. I was to go with him on his Wednesday assignment and be on the lookout for "breezy stuff" for a possible side-bar story. Actually, I didn't have much time to read. Dave and I watched the six o'clock news while I flipped through my college catalogs. We discussed the relative merits of communication arts courses, ate a greasy chicken dinner, and went to the local YMCA where Pam works to watch Pam and Karen play racquetball.

Wednesday was Elizabeth Blackwell Day in Geneva. Activities were held commemorating the 125th anniversary of Elizabeth Blackwell's graduation from Hobart College in 1849 as the first woman doctor in the United States. I went along with Thom on his interview with the past president of the American Medical Women's Association who was to receive the 15th annual Elizabeth Blackwell award. I asked a few questions of my own and scribbled notes in my journalese shorthand.

At the dedication ceremonies and a special luncheon marking the first day of issue of a national Elizabeth Blackwell stamp, I continued my interviewing. I was beginning to feel as if I was a reporter on the staff. "I'm from The Times" was how I introduced myself to the local and national medical and post office representatives. Thom said I worked well under pressure, a compliment I particularly appreciated. If true, it's a skill only recently acquired.

I kept Charlie and Dave late in the office, while I typed up all my notes. Then we went to the YMCA for the weekly *Times* staff volleyball game. I participated in the fierce competition. Not until the game was over did Dave casually inform me that Wednesday nights are strictly men's night on the court. Somehow it seemed appropriate that I'd made a play for women's rights on Elizabeth Blackwell Day, but I was nevertheless mortified. Later in the evening, we filled a long table in Geneva's most popular restaurant, which included the publisher Mr. Williams at the head, his wife, Dave and Pam, Charlie, Karen, Thom, and several others. The excuse was that it was the night before my departure.

(Continued on page 12)
Helping Others...
Educating Adults Through Communication Media

by ANNE RABUSHKA '74

Guatemalans may soon be working to the sounds of radio due to the efforts of a Cornell professor. However, it won’t be music that they’ll be listening to — rather it will be lessons on better farming techniques.

Prof. Royal D. Colle of the New York State College of Agriculture and Life Sciences is presently involved in a project aiding this developing nation. The program entails mass adult education through several communications media. Professor Colle notes that, “Guatemala is a country that has a great need for improvement in health, nutrition, and education, besides economic growth. In this project we recognize the need in all areas while concentrating, at the present time, primarily on agriculture.”

The objective of the Basic Village Education Program (BVE) is to stimulate the interest of the rural farmers in new, more efficient agricultural techniques. By using a variety of communications systems plus personal contacts with extension agents and teachers, the program will hopefully reach large numbers of people and strongly influence those reached.

“The challenge to us is to try to communicate to an audience that is largely lacking in literacy,” says Professor Colle. “We must develop materials that are helpful and interesting using such media as radio and audio cassettes; and visuals, such as flip charts, posters, and demonstration farm plots. However, they must be simple to understand and follow.”

Guatemala has an average illiteracy rate between 70 and 75 percent, the percentage being even higher in the rural areas. In many areas a rate of over 90 percent is not unusual. The BVE program will be important in bringing a greater amount of educational materials to these people than they presently receive.

The program content concerns the production and marketing of basic crops — corn, beans, sorghum, and rice in the eastern part of Guatemala; corn, beans, and wheat in the west. The majority of rural dwellers in this small Central American country are subsistence farmers using almost primitive agricultural methods. Hopefully, outside expertise and instruction can raise production levels and subsequently, the overall standard of living.

Professor Colle is working on the design and creation of materials for communicating with farmers in rural areas, specifically with the construction of a radio station. He will also be involved with setting up rural radio forums and be responsible for training Guatemalans so that they can run the program in the near future without need for outside help.

Approximately 20 American and Guatemalan professionals are working on the project, supplemented by volunteers in the villages. Professor Colle reports, “Our Guatemalan associates are very frank in discussion and very sociable. Our relationship will involve a lot of give and take instead of having them accede to everything we say. This makes for a very healthy situation.”

If the program is successful the Guatemalan staff will assume the total working and funding of the BVE program, not only in adult agricultural education, but in health, nutrition, and elementary education.

“The interesting part of this program,” according to Professor Colle, “is that we’re starting from scratch — we’re building a radio station, finding a local staff and using available materials and people in the villages.”

The BVE program is using a unique approach in its development of material. Professor Colle says, “We may go right to the villages to find some of our radio talent. For example, we’ll produce some ‘radio novelas’ — short programs resembling radio soap operas. We’re recruiting some of our talent from the local villages to act as the parts of the characters in the radio dramas.” This is similar to some of the experimental work Professor Colle has done here in New York State with audio cassettes. He has had successful results with the local talent in a communication project with low income people in Essex County. Professor Colle added, “My hunch is that we can duplicate that success in Guatemala.”

The theory behind this approach is that the villagers will accept and assimilate that which their own people are telling them (the technical term is homophily). The experts will only be employed to answer further questions and develop the demonstration plots.

The Basic Village Education Program is a new approach in improving a small environment — to make it more productive and to lessen the waste of time, labor, and cost in agriculture and education. According to Professor Colle, “In time it may be expanded to reach even greater numbers of peoples with equally pressing problems.”
A man in Maine uses a windmill-powered generator to heat his home. A New Mexico couple collects the heat of the sun in water-filled barrels to warm their house. Still others have come up with even more esoteric ways of beating the fuel shortage.

Not Will and Marie Provine. Instead of banking on technology to ease them through the cold Newfield, N.Y., winter, they’re looking to the past, to the coal age, for their solution to the energy pinch.

Two tons of coal, anthracite, sit in their basement. The first ton cost 35 dollars, the second a discounted 33. And the dealer in Painted Post, N.Y., near Elmira, delivered it all for free.

A coal-burning kitchen stove and a pot-bellied one in the dining room heat what Marie Provine calls an insulated package of rooms in the middle of her house. They’ve closed off unused rooms, fully weather-stripped and insulated the house, and shut the heat off completely at night. The result: they may get by paying less than 20 dollars a month for their heat.

Last winter, the Provines, she teaches communication law and he teaches history of science at Cornell, heated their two-story house with a lot of wood and a space heater. Now they’ve switched to coal, because, Marie says, “You can burn coal for a lot longer than an equivalent amount of wood.”

With no thermostats to control their coal-burning stoves, the Provines had to learn by trial and error how to regulate the heat inside their home. But now they can keep the temperature constant at any desired level up to 80-degrees by damping down the stoves and choosing between the coal and the hotter burning wood they bought for 14 dollars.

Having no thermostats creates another problem: it’s a cold house in Newfield by the time morning rolls around. That doesn’t bother the Provines though; according to Marie, it takes only half an hour for the kitchen stove to warm up part of the house.

But there is a back-up system, an oil-fired space heater that she says “we try not to use anymore than we have to.” However, Marie admits that “in the really cold weather, there will be no way to keep the pipes unfrozen without using the space heater overnight.”

Is the coal dirty? “Not at all, Marie says, “It’s beautiful when it gets hot. It’s very esthetically pleasing.” No black smoke, either, she adds.

Checking the situation, Marie Provine finds that fuel bills are kept low when you burn coal or wood to heat your dwelling. She also recommends closing off unused rooms, a house well insulated, and no heat at night.
Technology in the maple sugarbush has come a long way since those bygone days when sap was boiled in iron kettles over open fires fueled with logs from the back forty woodlot. Today's maple production is geared to a modern, efficient sap house (upper right) where the evaporator is gas or oil fired (lower center) to assure consistent quality in the “sugaring off” of the final product.

In the bush itself, the hand auger has been replaced by the power-driven bit (upper left) that makes spile-driving a cinch. Gone too are the old wooden buckets once used for gathering the sap. This vital process has been streamlined with interconnecting networks of plastic tubing (lower right) and pumping stations (lower left) that transport the sap to central collection points or directly to the evaporator.

Many of these advancements have come about through research conducted by the College of Agriculture and Life Sciences, particularly under the direction of Prof. Robert R. Morrow, Jr. Getting the new technology known and applied by maple producers has been the job of the College's Cooperative Extension division, largely through the efforts of Prof. Fred E. Winch, Jr. No longer strictly a backlot activity, New York's maple syrup industry now produces a crop valued at more than five million dollars, ranking first in value among the maple-producing states.
To The Sugarbush
Keeping your own honeybees may sound like an unusual idea, yet, according to Prof. Roger A. Morse of the Entomology Department in the New York State College of Agriculture and Life Sciences at Cornell, this is not as outlandish as many believe.

Honeybees can be kept almost anywhere, in rural areas as well as in urban environments. It has been reported that the Brooklyn Botanic Garden in New York City has been keeping their own honeybees. There has recently been an increased demand for honeybees and information about honeybees that various honeybee product supply companies are having a hard time keeping up with. Almost everyone loves honey and that is reason enough to be interested in it. Honey wine is particularly delicious, and because honey is a “natural food” it is also a nutritional bonus.

The price of honey is also an important consideration. Honey is a significant commodity on the wholesale world market. The demand for honey is so great that the price of honey per pound has tripled within the last 26 months. Demand patterns have changed, and with them so have the import-export balances. Ten years ago Japan did not import honey. However, Japan is now buying 6 to 8% of the world market supply of honey, competing with England, Germany and other traditional honey buyers.

Certain honey customers request “organic honey.” By organic honey they mean honey that is unheated and unfiltered. Most honey is heated to deter granulation, and filtered, using a filter press to remove pollen grains. There is a great difference between the prices of organic and inorganic honey. Buyers of organic honey are willing to pay twice the price of regular honey to get what they want. The high price of honey, as well as their own personal interest, has stimulated many people who use a lot of honey to begin raising their own honeybees. This is relatively simple, and can be accomplished with little trouble even in a small yard area in urban communities.

Honeybees do well in most western countries. There are four different honeybee species, yet only one of these is found in the United States. This particular species is of European origin, while the other three are Asian, and are not involved to any great extent with commercial honey production.

Cornell and the College of Agriculture and Life Sciences enters the honeybee picture by way of the Entomology Department. Professor Morse is the man most generally associated with honeybees and apiculture at Cornell. At Dyce Laboratories he and the apiculture graduate students are conducting research, using Cornell’s own bees, in the areas of honeybee reproduction behavior and chemistry. Several undergraduate courses in apiculture are offered by the Entomology Department to acquaint people with honeybees, and how they live and make honey, as well as a course in the techniques of beekeeping.

It is hoped that the research work conducted at Cornell will enable people to learn more about how a honeybee lives and produces honey, with the possible side effect of discovering a method to increase the honeybees’ production of honey, and ease the world shortage.

Prof. Roger A. Morse explains the significance of this illustration: "Sociality in honeybees is a closely controlled phenomena in which all the bees in a hive participate. There must be a minimum of 200 bees for a colony to function. In the experimental swarm which is pictured, each bee has been numbered with a color-coded disc. This enables researchers to follow individuals over the course of several days as they join in the colony routine. A worker bee's life is usually divided into two parts: first, she is a house bee, feeding the young, grooming the queen, cleaning the hive and controlling temperature and humidity; second, a bee takes up field work, gathering and hoarding the food for the times it is not available."
Fighting The Pollution Battle

by JOANNE CHUPP '75

Pollution of the air, soil, and water is important to everyone these days, especially now with the current energy crisis. Anyone walking around Cornell's campus viewing its lovely plant life and natural landscaping might find it hard to believe that Cornell University has a problem with pollution. But Cornell isn't different from any other large institution. It too has problems with pollution.

According to Mr. Noel Desch, director of the Buildings and Properties Department at Cornell, pollution is definitely a problem at Cornell. "Wherever you have people engaged in day to day activities you will have pollution."

However, Cornell is working on several major plans to alleviate problems with pollution. At present, the University is developing a program with environmental conservationists, the State of New York, and the Federal Environmental Protection Agency. There have been several meetings to date to discuss the programs.

Cornell does have anti-pollution programs in existence now. The heating plant, a major source of pollution, according to Mr. Desch, meets the present criteria in terms of the type of fuel required and operational procedures. The oil used in the heating plant is a better quality oil than required by law, and the coal burned is double screened. Recently the university spent $500,000 on new oil fired boilers and other updated equipment.

Although the complete schedule and costs are not known as yet, a major project of stack testing at the heating plant will be undertaken soon. Both of these new measures, the new boilers and the stack testing, will further reduce the pollution from the plant and increase its efficiency. This is very important, especially with the energy crisis at hand.

Mr. Desch also reports that pollution at Cornell will be harder to control with the present energy crisis. More coal will have to be burned because of the unavailability of oil, and this will cause a higher level of air pollution.

Other areas around Cornell are also a concern of the Department of Buildings and Properties. The "Cornell Dump" near the University orchard has recently been filled with non-combustible material as the result of a major effort launched about a year ago. Mr. Desch explains, "That area now has been completely restored; there is no evidence that it was ever a dump."

The other dumping site that is used to stop the remains of diseased elms is, in terms of pollution problems, relatively safe. There are no elms for miles around this area, and this location had not been committed to previous usage. However, there isn't a sufficient source of fill available for the dump. The chemical dump near the Tompkins County Airport is also being carefully monitored by the Division of Life Safety Services. The biggest problem at the dump as far as Mr. Desch is concerned is the improperly marked area. Signs marking the area have been shot full of holes, making it difficult to read the boundaries of the dump.

There has been a substantial number of improvements completed over the past few years by Cornell in the area of pollution control. Colby Boat House on Cayuga Inlet used to have a septic system. Similarly, the newly completed Riding Hall facilities are now connected to the Ithaca sewer system, unlike the older riding hall that had a septic system and used Cascadilla Creek. Also, the forage utilization facilities which drained into a storm sewer are now in the process of being connected to the sewer system of the new Chilled Water Plant.

(Continued on page 13)
After a huge meal, amidst much good-natured teasing, the Cornellians led a rousing chorus of “Far above Cayuga’s waters…”

Bleary-eyed people encircled the newsroom table at next morning’s meeting. It gave me pleasure to finally have some information to volunteer. I had a story to write on Elizabeth Blackwell Day.

When the story was completed, the managing editor took me out for a farewell lunch. He was curious as to whether the week’s experience had turned me on or off to journalism. My reaction was that everyone had been so friendly they could make any profession inviting.

Mr. Hadley reminisced about his lively postwar years at Cornell and then we discussed the philosophy of The Geneva Times. The publisher, Mr. Williams, is a well-traveled, multi-lingual man whose interest in foreign affairs often sends business-minded General Manager John F. Bertram around the world. The emphasis on national and international news is reflected in the pages of The Times in the heavy coverage unusual for a paper of its size.

The Times carries editorials taken from major newspapers and about 20 columnists on a regular basis on two editorial pages. This is not typical for a paper averaging 24 pages. It’s not all prize-winning journalism, however. As Mr. Hadley explained to me, people read the paper for local news. Therefore, they frequently print items on engagements, vacations, get-togethers, and the like that reflect community activities.

Also, there are seven full-time bureau employees sending in news from outlying counties, whereas similar papers may have only part-time stringers. The Times serves most of Geneva’s population of 17,000 and the growing suburbs and rural districts outside the city. Its readership extends to Ithaca.

Desert awaited me in the newsroom in the form of my article on Elizabeth Blackwell printed in The Geneva Times. It was my first taste of non-student publication, and I was proud. Above my byline was an editor’s note identifying me as a Cornell sophomore on a Student-Alumni Contact Program. Dave gave me extra copies of the newspaper, and we both joked how I was tempted to wallpaper my Cornell room with my story.

That evening General Manager Bertram held a meeting for professional and public representatives at The Times office. Once a month public input is encouraged to give the staff an idea of how the newspaper is meeting local needs and interests. Mr. Bertram showed me the list of complaints and suggestions. One outgrowth of this give-and-take practice is a regular column written in Spanish for the Spanish-speaking community. There are many diverse cultural groups in and around Geneva.

Thursday, Jan. 24 was my last day. The policies and practices of the newspaper had come alive for me as I observed the staff in flesh and blood portrayals of reporting and editing under deadline conditions. I had been thrust into the excitement of personally covering events. Crossing over from the classroom was not as difficult as I had built it up to be. While the routine is still not quite second nature to me, it has acquired an air of comfortable familiarity.

Saying goodbye always brings me down. Saying goodbye to people who’ve taken me into their homes and lives is especially depressing. More thanks were inadequate to express my gratefulness.

Dave drove me to Ithaca late Thursday night with all my back-to-Cornell luggage. Friday morning I registered for spring semester courses. Saturday, while my article on the upcoming lecture at Hobart College was being laid out for a page in The Geneva Times, I was standing on line for the Grand Course Exchange in Barton Hall. Monday I started classes. But I’d already learned a great deal.

I’d learned what’s beyond merely reading the newspaper over a cup of coffee by taking an active role in the creation of that newspaper. Everyone at The Times jokingly attempted to distort my lofty conception of the newspaper as art. They didn’t succeed. Rather, by hobnobbing with the staff during their daily routine, my understanding and appreciation of their profession increased. Stepping back into the world of Cornell academia was difficult for me after the week’s exposure to the life of a journalist, courtesy of the College of Agriculture and Life Sciences and The Geneva Times.
Several additional programs are planned for the near future at Cornell. There will be a complete testing program of Cornell's sanitary sewers this year. The University has its own sewer collection system, which is attached to the City of Ithaca’s system. Forest Home, a residential community on the east and north end of Beebe Lake, will have joint Cornell-Ithaca sewer systems connected in the near future. Forest Home has been a major source of pollution to Beebe Lake for years, so this is definitely an anti-pollution measure. The Plantation Field House and the old Forest Home School will be connected to the new Forest Home system.

The Hydraulics Lab, built in Fall Creek gorge under Triphammer Bridge, will also be connected to the sewer system. The Lab hasn’t been used in years, but it will be in use soon so this is a necessary measure. Materials from construction, such as excess dirt and sediment, still are a problem for Cornell’s Department of Buildings and Properties. At present such material must be taken to the Tompkins County landfill, but this increases construction costs. An improvement must be made in this area, says Mr. Desch.

Consultants are working on Cornell’s most serious pollution problems with the Department of Buildings and Properties. Hopefully they will find ways and means that will feasibly and economically provide solutions.

POLLUTION continued from page 11

Researchers make plans to explore possible pollution of Fall Creek near the Cornell campus.

MR. DESCH reports in reference to the problems, “There is no doubt in my mind that more and more improvements will be required. Cornell will continue to play a major role in reducing the pollution in our area not only academically but operationally.”

Certainly pollution is a problem at Cornell as at other institutions this size. But with the anti-pollution programs now in practice and those planned for the future a better environment is underway. Indeed, the future looks optimistic.

Agricultural Districts Preserve Farmland

The recent, rapid growth of agricultural districts less than 75 miles from New York City indicates the initial acceptance of the Agricultural District Law in protecting farmland from speculation and suburban sprawl, report two Cornell University economists, Prof. Bernard F. Stanton and Howard E. Conklin.

“Scattered urban development has led to speculation and false expectations about windfall gains in the land market. The last thing most communities need is idle land out of production today in the hope that it will compete in a new use in some unknown tomorrow.”

Stanton explained that the Agricultural District Law, which went into effect September 15, 1971, protects agricultural land as a viable segment of the state's economy, and as an environmental resource of major importance. About 100 agricultural districts, covering nearly one million of the state’s 30 million acres, have formed in the past two years.

“Of greater importance,” Stanton said, “is that they include 15-20 percent of the state's best farmland as identified by the State Commission of the Preservation of Agricultural Land.”

The Cornell economists explained that when acreage is placed into an agricultural district, the right of public agencies to acquire land by eminent domain is modified. Also, local governments may not restrict or regulate farm structures or practices beyond the requirements of health and safety.

Much of the work developing the concept and reality of agricultural districts, Stanton said, was done by the N.Y. State College of Agriculture and Life Sciences, Cornell University, the state's land grant university, in cooperation with Cooperative Extension, local governments and the state government.

The Cornell economist noted that this system has had its greatest effect in areas where homes and building developments are spreading out from cities and encroaching on farmland.

“Orange County, an old, established agricultural area less than 75 miles from mid-town Manhattan, has the largest area in agricultural districts,” Stanton said. “This county’s planning commission and urban oriented legislature have enthusiastically encouraged the formation of districts.”

Other regions of the state that lead in the number of acres placed in agricultural districts are Chautauqua, Columbia, and Livingston and Washington Counties.
Dr. Noland L. VanDemark . . .

**Experiment Station Director Appointed**

Noland L. VanDemark, professor and chairman of the Department of Dairy Science at Ohio State University, has been appointed director of the Cornell University Agricultural Experiment Station. At the same time, he was named director of research at the N.Y. State College of Agriculture and Life Sciences.

In his capacity as director of the Experiment Station, VanDemark will serve as the chief executive officer in the administration of research grants from the U.S. Department of Agriculture and cooperative projects in the College, the N.Y. State College of Human Ecology, and the N.Y. State Veterinary College, Cornell.

As director of research of the College, he represents the dean's office in providing leadership in the development and administration of the overall research effort of the College, Dean Kennedy said.

Also appointed to the College faculty as professor of animal science, VanDemark succeeds Nyle C. Brady, who became the director of the International Rice Research Institute in the Philippines.

A native of Columbus Grove, Ohio, VanDemark received both his B.S. and M.S. degrees from Ohio State University. In 1948, he obtained his Ph.D. degree from Cornell.

A faculty member of Ohio State University since 1964, VanDemark has served as chairman of the Department of Dairy Science at Ohio State and at the Ohio Agricultural Research and Development Center in Wooster. In addition, he has served as director of the Animal Reproduction Teaching and Research Center, which was established in 1967 under his leadership.

From 1948 to 1964, he was on the faculty of the University of Illinois. Earlier, he spent a year in Austria as a livestock specialist for the U.S. Allied Commission and helped institute a cattle breeding program in that country. During World War II, he served in the U.S. Army Counter Intelligence Corps.

An international authority on reproductive physiology, VanDemark is coauthor of the book, "Physiology of Reproduction and Artificial Insemination of Cattle." He also is coeditor of the three-volume treatise on "The Testis." He has been author or coauthor of more than 180 scientific papers.

In 1959, VanDemark received the Borden Award, the highest award given by the American Dairy Science Association. He was recognized for his scientific contributions and pioneering work in the reproductive physiology of dairy cattle, sperm physiology, and artificial breeding.

In 1964, he received the Italian Gold Medal at the Fifth International Congress in Animal Reproduction held in Trento, Italy, for his pioneer work in the field of reproduction. While at the University of Illinois, he received the Alpha Zeta Outstanding Agriculture Teaching Award.

Active on the national and international scenes, VanDemark served on the Physiology Committee of the Agricultural Board in the National Research Council. He also served as consultant in the reproductive biology study section of the National Institutes of Health.

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**Ag Society Honors Emeritus Professor**

**Dr. Stanley W. Warren,** left, receives the D. Howard Doane Award from Floyd Madden, National Awards Committee Chairman, during the 45th Annual Meeting of the American Society of Farm Managers and Rural Appraisers in Denver. Dr. Warren is professor of farm management emeritus at the College of Agriculture and Life Sciences.
Marcia Wities Orange '71, a major in the Department of Communication Arts, is now advertising/sales promotion administrator with the Public Affairs Department of RCA Global Communications in New York City. Marcia's husband Herbert Jerome Orange '71 is with the Brooklyn Botanic Garden's Education Department.

Bernard W. Potter '43, Truxton, New York, has been appointed Deputy Commissioner of the State Department of Agriculture and Markets succeeding John H. Stone of Watertown. Mr. Potter operates a 250 head Holstein dairy farm near Truxton, New York. He has served as Director of the New York State Fair since 1967.

Wendell E. Field '27, Syracuse, New York, retired on January 1 as manager of the Central New York Regional Market. For the past 21 years he has served as superintendent of the Youth Department at the New York State Fair. In 1948 he was presented the honorary Empire Farmer Award by the New York Association of Future Farmers of America.

Bruce B. Miner '35 retired in September as editor, writer and librarian of the Connecticut Agricultural Experiment Station after 18 years on the staff of that institution.

Charles H. Riley '38 has been named group vice-president-General Services for Agway, Inc. Mr. Riley is president of the Alumni Association of the College of Agriculture and Life Sciences.

Fred L. Trump '49 has written a new book titled, Uphill into the Sun. Fred is the author of many magazine articles and two previous books, Buyer Beware! and The Grange in Michigan. For several years he was assistant editor of Michigan Farmer magazine, and since 1967 he has been information specialist for Kansas in the U.S. Soil Conservation Service. He and his family live in Salina, Kansas.

Dorothy Lampe Hill '26, on a recent visit to London's Royal Horticultural Society, found an apple variety called "Tompkins County" among the numerous display of plants. She was advised that it originated in the United States and that it was very popular with the British. A check with the College's Pomology Department reveals that this variety, in existence for well over a century, is also known as the King apple or Tompkins County King.

Gerry Neenan '75, who is in the College's Exchange Program attending I.T.E.S.M., Surcursal de Correos "J", Monterrey, Mexico, reports that his classwork is interesting but that the workload is considerably less than at Cornell. A communication arts major, he explains that newspapers in Mexico are different from those in the United States in several respects. He notes that they print front page advertising, many open letters to the government in huge, bold print, and seem to publish more world news than American papers.

James C. Preston '50 has been named as associate professor in the College's Department of Rural Sociology. Prior to this appointment, he was an assistant professor and chairman of the Community Resource Development Program of Cooperative Extension. He was appointed an assistant agricultural agent in Steuben County in 1950, and from 1953 to 1963 he was the Cooperative Extension agent and division leader for Genesee County. He then joined the extension administration staff at Cornell.

Damon Boynton '31, a former professor of pomology and dean of the Graduate School at Cornell, has been appointed a visiting professor in the College of Agriculture and Life Sciences.

Ag Alumni To Hold Annual Meet June 15

The 1974 Annual Meeting of the Alumni Association of the College of Agriculture and Life Sciences will be held Saturday, June 15, following the Alumni Breakfast, which is scheduled for 8:00 a.m. Officers and Executive Committee members voted this new date because this year's Agricultural Leaders' Forum is being conducted as regional meetings in various parts of the state rather than entirely at Cornell as in the past. The Alumni Breakfast will be part of the University's regular Alumni Reunion activities (June 13-17). Business to be conducted at the Annual Meeting includes adopting a revised constitution and election of directors. Further details of the meeting will be sent Alumni Association members at a later date.

PICTURE CREDITS

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1974 Agricultural Leaders' Forum:

Theme: Food for the 70's — Abundance or Scarcity?

Coffee and Registration — 10:00-10:30

PROGRAM (begins at 10:30 and ends at 3:30)

Introduction — Setting the stage
Dean W. K. Kennedy (chairman, morning session)

Energy and Agriculture — Fuel, Fertilizer and Equipment
Professor Donald R. Price

Discussion

Lunch

Chairman of afternoon session — D. L. Call

World Markets and Northeast Agriculture
Professor Bernard F. Stanton

Discussion

The Domestic Market in the Mid 70's
Professor Max E. Brunk

Discussion

General Discussion — all participants

Dates and Places

March 19 — SUNY Agricultural and Technical College at Canton
March 20 — SUNY Agricultural and Technical College at Cobleskill
March 21 — The Fire House at Alexander
March 25 — New York State Grange Headquarters at Cortland
March 27 — The Ramada Inn at Newburgh

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A Past Based On The Future
by LESLIE CANFIELD '75

What would you do if someone just offered you a chance to be educated for free? If you were fifteen years younger, you and all your friends could have attended the New York State College of Agriculture and Life Sciences for only a nominal fee, according to Dr. Herbert Everett, Director of Resident Instruction. Of course, this dream of a tuition-free education now costs $1350 and projections for 1974-1975 are $1500 per year.

Tuition is not the only thing that has changed in the Ag school. Financial aid, admissions policies, mix of students and their interests differ markedly from twenty years ago. Dr. Everett became the director of resident instruction in 1964 and he pointed out the interesting metamorphosis that took place before and during his directorship.

Twenty years ago, the student who came to Cornell with some sort of financial need was able to settle his debts through a package of scholarship, family contribution, and work. Today the same student would have to do the same, but a substantial part of his tuition would be supported by a large loan. This leaves the prospective graduate with a very high debt as he enters the job market. In addition, Dr. Everett stated, that although financial aid is up as compared to twenty years ago, it is not nearly enough to cancel the increase in tuition. He added that S.U.N.Y. is working to stabilize tuition hikes, but the College of Agriculture is also answerable to Cornell University. That is, it must help support the costs of the University Gannett Clinic, the Dean of Students and so on. There is also a current idea that public school should pay tuition. Thus, with all these factors involved, it is not surprising to find financial aid a little scarce.

Admissions policies have changed markedly within the last twenty years also. Perhaps the most interesting of these changes is in the mix of students entering. For an incoming class, there used to be a high percentage of freshmen and a small number of transfers. Over the years this enrollment changed gradually. Partial cause of this was the S.U.N.Y. masterplan for enlargement of state schools. This affected Cornell as follows: out of a class of 950 incoming students, 400 are now transfers. This is also reflected in the fact that the entire student body grew from 1700 to 2800. The whole S.U.N.Y. system now accommodates approximately 250,000 full-and part-time students on 70 campuses. Of these 70 campuses Cornell is the only four-year college of agriculture. Each year applicants for admission have increased – to over 3000 students for 550 positions, for this year. Out of this 3000, there are 2000 applying for Biological Sciences, Preveterinary studies, and Natural Resources. To make things even more difficult, out of the total number of freshman applicants, 100 are usually selected on the early decision plan which was instituted before 1963. An interesting point is that Cornell has always had a rolling admissions policy.

Once a student has matriculated at Cornell, Dr. Everett said, his chances of graduation were 85%. (This includes those who get their degrees from the Veterinary College, other schools in Cornell, and those who transfer elsewhere). The percentage of graduates going on has remained surprisingly stable over the past twenty years. Thirty-five to forty percent of the graduates enter graduate school, law school, medical school, and veterinary school. Another 35-40% are placed in jobs immediately upon graduation. The most interesting change has been in the student who went back to the farm. In the 1930s about 60% of the graduates from the College of Agriculture went back into farming, on family farms, or in relation to the farming enterprise. Now about eight percent go back into the family enterprise which usually is worth between 150-250 thousand dollars. This accounts for about 60-70 graduating seniors. In terms of further education, applicants to law schools have changed only a little, with a fair success rate. Most applicants do get in somewhere, although it may not be the first choice school. In some instances a degree in Agriculture may be an asset, as many law schools strive for heterogeneity in their incoming classes.

The advisor system at the College of Agriculture has been around for many years, at least since the 1940s. Dr. Everett feels that this is a good system as compared with a centralized system which other universities have. It would be very difficult to accommodate 2500 students

(Continued on page 11)
Looking Backward . . .

Campus Issues: Then and Now

by JOANN KICHTON '75

As the years go by our society changes more and more rapidly. We've come from horse and buggy to Model T Fords to travel by jet. We started out reading newspapers and now tune into radio and television. People eat frozen foods as well as canned peas and burn light bulbs instead of candles. The changes go on and on and on. Or do they? Has everything changed? Believe it or not, some ideas have stayed pretty much the same. For instance, look at the causes Cornell students fought for then . . . and now.

In 1904, Cornell students began a campaign concerning the recognition of Election Day as a holiday. If someone wished to go home to vote he was granted a leave of absence. The students felt that a leave was insufficient. In several editorials appearing in the University paper, they presented their arguments for the recognition of Election Day as a holiday.

Missing classes and having to make up the work discouraged students from travelling home to vote. In addition, students felt the broad, liberal policies generally employed by the University indicated that Cornell wouldn't allow such a minor obstacle to prevent a student from voting. Furthermore, the University had an obligation to the state and federal government to encourage its students to vote - not to hinder them. During this particular election period, a United States president and a New York State governor were to be chosen. The election was an important one. The majority of students wished to fulfill their moral obligation and legal right in choosing these leaders.

The question of whether or not Cornell should recognize Election Day as a holiday was finally taken to a University faculty meeting. The faculty decided that classes would be held on Election Day but that anyone who wished to go home to vote would be granted a leave of absence.

A similar question of political responsibility arose in 1970. In May the University Senate passed a bill establishing a two-week citizenship recess from October 24 to November 4. U.S. Senate elections were to take place in the fall. The recess would allow students to take part in the campaigns of those candidates running for office.

Students returned in the fall with varying opinions concerning the recess. Some favored it because it would give them an opportunity to do something useful during their vacation time, i.e., become actively involved in their country's government. Others opposed the recess. They didn't like being forced into political involvement when they weren't interested in such involvement. They claimed the idea of a citizenship recess should have been put to a University-wide vote and not decided when many of the students were already home for summer vacation. Those against the recess also believed that the University was getting involved in politics to the point of disturbing the educational process. Some professors wished to continue teaching classes throughout the two-week break. Whether the Cornell population liked it or not, the citizenship recess took place.

Andrew D. White's plaza, while planned to enhance the campus scene, did not receive many favorable comments.
One of the big issues back in the 1920’s was that Cornell men decided women did not belong on campus.

Another problem which continues to surface through the years involves student concern for the physical layout of the campus. Believe it or not, students still take pride in their campus whether it involves appearance or function. In 1949, one of the sites proposed for the Industrial Labor Relations (ILR) building was Hoy Field. The students didn’t want to lose Hoy Field which was used for baseball and intramurals. Losing Hoy meant that baseball would be forced to share the Alumni Field with football, track, lacrosse, and soccer. Furthermore, if all the teams used the same field, the intramural program would have to end. There just wouldn’t be room for everyone. The costs of replacing Hoy Field with a new baseball field at a different site were formidable. As if this wasn’t enough, the Cornell Administration had promised that Hoy Field would “never be used for any purpose but that of outdoor athletics.” While this wasn’t legally binding, breaking such a promise might have cost Cornell future donations from alumni.

The general consensus of the students was that the ILR building could easily be located on a spot other than Hoy Field. The controversy was finally settled by the University Board of Trustees. The ILR building would be built on the East Avenue site rather than on Hoy Field. Student concern was a strong factor in saving the baseball field.

What’s the building crisis of the seventies? Would you believe patios and plazas? In 1972, Harold D. Uris gave Cornell a large sum of money for the renovation of the arts quad. Plans were made to build a huge patio in front of Sibley Hall, a brick plaza around the statue of Andrew D. White stands in front of Goldwin Smith Hall, and a kiosk between Goldwin Smith and Lincoln Hall. When construction started and students found out what was going on, the criticism began. The main attacks were on the patio and the plaza. Sibley's patio would replace grass with concrete and students claimed the brick plaza was ugly, inappropriate, and not functional. The plaza did not fit in with the architecture of the buildings on the arts quad. With the elms disappearing from the quad, students felt Uris’ gift should have been used to buy trees rather than concrete and bricks.

The brick plaza was finished but the Department of Building and Properties postponed building Sibley’s patio to hear opinions and suggestions. The results? Sibley has a wide new sidewalk but no patio. A row of young trees lines the sidewalk. As for Andrew White's plaza, it still remains even after several attempts by students to have it removed.

In modern terminology, one more issue which appears periodically is woman's lib. The female struggle for equal rights is nothing new. Back in 1920, Cornell men decided that women shouldn’t be a part of the Cornell community. Nine male undergraduates formed a committee whose purpose it was to determine the role of women on campus.

The committee reached the conclusion that the enrollment of women should be cut back and that eventually a separate campus should be provided for them. The committee claimed that men wouldn’t sign up for courses that had too many women in them and the number of women kept increasing.

Furthermore, the male students feared that Cornell would be labelled a woman’s school. They didn’t want Cornell to lose its reputation for being a rugged school. If too many women attended the University it would no longer be able to recruit the athletes necessary to maintain its athletic prowess. A good athlete wouldn’t want to go to a woman’s school. In short, the committee decided that the restriction of women from the Cornell campus “is not only advisable but essential to the preservation of Cornell — the Cornell we now know.” Regardless of the committee’s decision, the women persevered and stayed on campus.

Here it is 1974 and women still must struggle for their rights. Now however, the women antagonize the men rather than the other way around. Their target is one of the guys’ last strongholds — Teagle Hall and Barton Hall. Two Cornell women tried to get a locker in Teagle and play volleyball in Barton. They were denied the opportunity to do both. The two women charged the Cornell University Corporation with denying the use of Cornell gym facilities due to sexual discrimination. The issue was taken before the University Hearing Board. After much debate an agreement was reached and the suit was withdrawn. The women won. Basketball and volleyball courts in Barton Hall are now reserved for women. Hours for co-educational swimming at Teagle have been increased and locker rooms, gym suits, and towels are provided. In fifty-four years women have gone from being unwanted on campus to winning access to the gym facilities provided for men.

Indeed time passes and society changes. If today’s rapid pace of life begins to overtake your peace of mind, stop and take a look at the issues then and now. Some things stay the same.
Viewpoints From Former Days

by RODNEY BROOKS  ’75

Impressions of bygone days do not always focus on major events. Often they are reflected in day to day activities. In the case of one old-timer looking backward it is the dashing of Cornell students to Collegetown restaurants in 1910 for a 25-cent breakfast of oatmeal and poached eggs on toast, and gulping it down practically on the run across the Cascadilla Gorge to be on time for 8:00 a.m. classes. This picture of the past also includes men dressed neatly in suits complete with ties, and women in dresses down to their shoes.

To get some idea about similar impressions of former days, this Countryman reporter talked with three Ithacans who have witnessed comings and goings at Cornell from different perspectives. Those interviewed were Sellman Woollen ’14, Arthur Kulp ’42, and Christian Boissonnas ’64.

Woollen came to Ithaca from Maryland in 1910 to attend the New York State College of Agriculture. His major studies included the fruit and poultry sciences. A highlight of this experience was his studies under Professor James Rice, believed to be the first poultry professor in the world. Woollen left Ithaca after graduation in 1914, but returned here in 1951 and helped to influence the start of a school of religion at Cornell.

His impressions of college days includes a campus with some 4,000 students, with about ten males for every female. At that time, most of the women were enrolled in the New York State College of Home Economics, now known as the College of Human Ecology. Martha Van Rensselaer was dean of the College in those days, a woman Woollen describes as “the quintessence of dignity.”

Woollen fondly remembers that football and crew were the most popular sports in those days. Cornell had the number one crew team in the nation from 1909 to 1912, he recalls.

For their social life the students went to the Lyceum Theater for live entertainment and to the Happy Hour theater for movies. Both were located in downtown Ithaca. Woollen described how Cornell men made national newspaper headlines when they were, as he put it, “insulted to have a low-down sex show put on in Ithaca and went down to break it up.” The leading lady came out on the stage and was met by a barrage of eggs. The Ithaca police force, which consisted of two officers, was helpless. Although no damage was done, a few of the alleged ringleaders were arrested.

When Arthur Kulp, a native Ithacan, went to Cornell in 1938 tuition was $400.00 a year in the Arts College and the State Colleges were free.

ROTC was compulsory and the University band was a military band. Kulp received his ROTC credit by playing in the band.

“The Engineering College was in Sibley, Rand, Franklin, and Lincoln Halls,” he recalls. “What is now the Engineering Quad was just grass. It was used for archery practice. The Veterinary School was where the Industrial and Labor Relations (ILR) School is now. The Agriculture Library was in the basement of Stone Hall.”

In the days when newspapers were two cents and the movies cost 25 cents Kulp worked in the University Library. This was 1941, and he was paid 35 cents per hour, increased to 40 cents per hour if he worked on Sunday.

Says Kulp, “I saved enough out of that 35 cents per hour to get a car. It cost $75.00. My brother and I bought it together. It was a 1931 Chevrolet, a Roadster with a rumble seat.”

“Fraternities were stronger. Social activity revolved around them. The men were all living in the Baker towers. The women were across Triphammer Bridge in Balch and Prudence Risley dorms.”

Christian Boissonnas, Assistant Circulation Librarian at Olin, recalls that when he went to Cornell from 1960 to 1964 social life on the campus still revolved around the fraternities.

“The University-sponsored activities were not much,” he says. “Everybody was anything joined the fraternities. Half of the male students belonged to them.” He also remembers that every student had to take 25 weeks of farm practice regardless of his major in the College of Agriculture.

Boissonnas worked as a student page in the University library earning 90 cents per hour.

“There were fewer women,” he notes. “Everybody hitchhiked to Wells. Appearances were stricter. You would put on a tie for a date. There were several big hangouts including the Chapter House and Johnny’s Big Red in Collegetown and Zink’s on South Aurora Street.

“I.C. weekend, Fall Week and Spring Weekend were big social events. If you were independent (without a fraternity or sorority) and wanted companionship and friends you had better know someone in a fraternity. There were, however, big dances at Barton Hall that you had to wear tuxedos to.

“I think many of the changes have been for the better at Cornell,” Boissonnas concludes. “I don’t think Cornell as a whole is worse than it was then. If I could do it again I would probably not go to Cornell’s undergraduate school. It was difficult to get to know your professors. There were so many people you didn’t know.”
Over the Years...
From Trolleys To Buses

by STEVEN BRALLIER '75

To the sheer delight of little boys sitting on the curb, Ithaca trolley cars meant either a bunch of bangs or searching the gutters for freshly sculptured pennies. The bangs hopefully frightened someone, but more often than not just went bang, as caps carefully placed on the tracks exploded under the trolley's weight. You can imagine the mischievous comparison between a trolley flattened penny and the normal specimen. Charles Mandeville, Freeville postmaster and a lifetime area resident, related his version of these events to me. He remembered the events since his father had owned the grocery at the corner of Dryden Road and Eddy Street. At this corner a trolley turned to pass in front of Cascadilla Hall.

On November 2, 1905, a group of Cornell pranksters found the trolley tracks to be a superb target. Fortunately before traversing the suspected rails, Motorman Shannon noticed that they had been soaped. He sanded the rails. However, before he could pass another time the culprits had repeated their sinister deed. Two men were eventually hired by the city to keep autumn leaves off the rails and of course to sand soaped rails. For the whole lot of Cornell students who monitored Cayuga Lake for its skating condition, much as skiers watch the weather today, the trolleys served as trusted carriers. The code consisted of either a red ball or flag attached to a trolley which alerted students to good skating.

It seems that the forty-eight year romance Ithacans had with their street railway came from other reasons than the primary function the trolleys served... that of transportation. Nevertheless, the ease of mobility afforded by them was appreciated and it did not take long for those on East Hill to begin clamoring for their own service. Six years after the inception of the Ithaca Street Railway, service to the Cornell area began operation. Rails climbed East State Street, turned onto Eddy Street, then turned again at Dryden Road. Upon reaching Heustis Street (College Avenue), the tracks crossed Cascadilla Gorge, proceeded up to East Avenue and then went through the middle of the campus. A short spur jutted into the Arts Quad to stop directly in front of Uris Library. The loop was completed by going down Thurston Avenue then back to East State Street again. Thirteen years after the beginning of the loop, patrons who wished to ride the entire circuit or the alternate Cayuga Heights loop were offered ten tickets for a lump seventy-five cent fare.

Presently a careless student living downtown may have to hitchhike up Buffalo Street in order to punctually make his 8:00 a.m. class. This was not the case in days since gone when a nickle paid one's way up to Cornell or on out to East Ithaca Station, where connections could be made with the Lehigh Valley and the Delaware, Lackawanna and Western Railroads.

Service came to Cornell partially because of a critical problem in student housing. Trustees anxious to solve the problem found Andrew White, the University President, far less eager to allow an invasion of the campus by these noisy contraptions with their poles, wires and rails. The trustees resolved the issue by acting while White was traveling in Europe. It is not known whether or not the trolleys helped solve the housing problem. However, White later apologized for his opposition to the railway company.

After briefly scanning Ithaca's streetcar history, the campus bus of today appears far less romantic, indeed quite dull. Unlike San Francisco, Ithaca could not maintain her trolley system. The magical trip has given way to belching smoke and fumes in the name of technological progress. We view mass transit today as a convenient necessity, but we do not confer on it the esteem we give the Ithaca Street Railway. While the two systems are incomparable, some important aspects of the present system have missed the public eye.

The beefed-up red and white school buses which comprise the Cornell fleet began their service in the fall of 1965. The need for bus service arose from the simple reason of an over-crowded campus. New buildings had displaced on-campus parking. The normal growth of the University increased the density of both people and cars on campus, and traffic flowing through the campus further aggravated the situation. Booths which are now manned from 7:30 a.m. until 5:00 p.m., for the regulation of on-campus traffic, were not built until approximately three years later.

From its beginning the system intended to serve staff and faculty. However, a growing fleet saw the original plan expand to include students. Beginning with five buses the fleet has grown to thirteen buses. Accumulated mileage in the first fiscal year totaled 77,000 miles. This figure grew every year, revealing patterns in usage.

The second fiscal year mileage jumped to 129,000. Then growth slowed down until mileage went from 136,000 in 1969-1970 to 177,000 in 1970-1971. That year marked a drastic increase in the number of students who used the bus service. In 1972-1973 mileage reached 216,000. This year the gas allotment has been based on last year's mileage figure. However, despite a bearable fuel situation for bus services at Cornell, a problem faces the Cornell Department of Transportation from the increased student use.
As America changed from a rural society to an urban one the need for mass transit had to be confronted. At the time most of these pictures were taken automobiles had not yet become the prevalent means of transportation. Ithaca, a progressive "little big city," met the challenge by bringing the innovative trolley to its streets. Some 5,000 people depended on the trolley each day at the height of the era for the Ithaca Street Railway Company, although cars initially moved little faster than a jog. In these pictures of those bygone days you will recognize Uris Library and McGraw Tower and the Eddy Street Gate before the trolley passes in front of Cascadilla Hall. Also shown is the Stewart Avenue bridge, a frequent setting for Ithaca's film industry movies. By 1935 the trolley was replaced by another innovation, the motorized bus. Today buses still ply the streets of Ithaca, which is not always the case in cities of equal or even larger size.
Ithaca’s Rapid Transit - In Slower Day
In 1967 hiring student drivers during peak periods seemed a good solution to easing the strain of overcrowding. Express runs were set up for students to drive and they substituted for full-time drivers when necessary. It did not prove to be a solution. However, other benefits have come from using student drivers.

Bill Crissey, manager of Bus Services, said this about his staff of full-time and student drivers. "I know there are times when the drivers get quite upset with the students and overcrowding. But with so many students in and out of here at the garage and in the coffee room, mingling with them has helped to alleviate this problem. We have twelve to fourteen students on the payroll and this means the staff and students have had to relate, understand each other and generally get along. After the term is over drivers are glad to see the jam-packed loads gone, but when a month has passed a couple of drivers begin to complain about the deadness on campus. The students do make things interesting."

Quite naturally a gap of understanding can exist between University employees and students because of their different roles. However, the full-time drivers have become interested in students' lives and vice versa through this work experience. One family of students has made a particularly impressed upon the staff drivers. Delos Dann was one of the first student drivers. After his graduation in 1969 two of his brothers came to Cornell. Both Dave ('73) and Doug ('73) drove buses while at Cornell.

"We have to kid about them," Bill said, "but there's a couple more brothers coming along from the Dann family."

Like this group of three brothers most student drivers have come from a farm background. Recently though, a wider range of backgrounds has been represented among student drivers. Perhaps more interesting is the representation of women in this male dominated occupation. Marion Hanson has been a full-time driver for several years and more recently has been joined by women student drivers.

Students must have their class two chauffer's license to qualify for a driving job. They are paid the starting wage for all bus drivers, as established by the personnel department and therefore it is one of the better student jobs.

Another solution to overcrowding would be to add more buses and drivers, thereby expanding the service. In the midst of our energy crisis such a solution is unfeasible. Like a growing adolescent, Campus Bus Service bulges at its seams and unless fitted with new clothes will burst. No one has speculated where the system will burst, but Bill Crissey feels something must give. Considerate attitudes and prudent use can ease the strain.

Bill said, "No one has ever come out to say that students could not ride, so they have been picking up their riding to the point that in another year a decision must be made whether all the students can or cannot ride on the present routing. We would probably not be in such bad shape if one and two block riders could be discouraged. We have tried to discourage such short riding through letters to the Cornell Daily Sun, but it hasn't helped. The bus is there and they don't have to pay so they're going to get on."

As they say, "The price is right!" Indeed it is free and unfortunately we abuse such. Bearing with the cramped full buses, displaying considerate attitudes and offering our suggestions will show our recognition of the excellent service which Campus Bus has rendered this community. Lance W. Haus, Director of Cornell's Transportation Services and the University Senate Subcommittee on Parking & Traffic, chaired by Professor Robert York, would welcome your suggestions and cooperation.
A Look At Cornell Cooperatives

by HILDA WILLIAMS '75

Every building on the Cornell University campus has a story to tell in one way or another. Each structure is unique and different in its own right. Some are remembered for their total structure; others for a particular room or the design of its entrance. From the towers of some of the dorms to the dedication plaques on certain buildings as well as to the specific names of the buildings themselves, we are able to perceive a collage of Cornell's past, perhaps even a hint of its future growth.

Equally interesting as part of Cornell, but perhaps not as much noticed as the University's more easily identified buildings, are some of the various cooperative living units that contribute to the total campus scene. All have histories of their own. Yet three of them might be considered here as representative for a brief glimpse into the backgrounds of such cooperatives. These are Watermargin, von Cramm, and Wari House.

Watermargin, located off upper University Avenue, was a Cornell enterprise for male foreign students. It was established in the academic year 1948-1949 for the purpose of fighting racial and religious prejudice. The name Watermargin has its origin in a Chinese classic written by Nai-an Hsi. The title of this novel was translated by Pearl S. Buck to mean "All Men Are Brothers." It tells the story of an army of fugitives who camped together near the base of the Liang Mountain at the water's margin for the purposes of fighting against the injustices of the Ming Dynasty.

Watermargin's early residents tried very hard to push Human Rights. They held conferences as well as concerts to show to the public that all races of people could live in harmony with one another. Famous persons came to speak and perform on Watermargin's behalf. The following is a partial listing of some of those persons: Dizzy Gillespie (famous band leader and trumpet player); Eleanor Roosevelt (wife of the late President Franklin D. Roosevelt); Roger Baldwin (National Committee Chairman of the American Civil Liberties Union); Marian Anderson (world famous contralto singer); Professor M. Mujeb (U.N. Delegate of Eastern Relations); Langston Hughes (renowned poet), and Dr. Margaret Mead (Associate Curator of Ethnology for the American Museum of Natural History).

Von Cramm, which is located on University Avenue just below Stewart Avenue, was Cornell's first male scholarship living unit. The land upon which Von Cramm stands was acquired by Cornell after the death of the property owner, the late Charles E. Treman.

The three hundred thousand dollars which was used to build this cooperative in 1936 came to the University as a gift from Baroness Elizabeth von Elverfeldt through Thomas B. Gilchrist, the administrator of her estate. The building was erected in memory of her son Baron Frederick Sigismund von Cramm who was killed in 1941 while serving in the German Army.

Barones von Elverfeldt was a native of Brooklyn, New York, who migrated to Germany after the death of her father and the remarriage of her mother to a German citizen. She later married a German Baron and acquired his estate upon his death.

Wari, which is located at 208 Dearborn Place, is one of Cornell's newer living units. The land upon which this cooperative stands was purchased by the University in the spring of 1968 and by the fall of 1968 it housed 11 black female students. This house is open to all students in the Minority Group Program.

Wari was created as a progressive step to allay the increased tension of the black community that was on an upward swing between 1965-1967. Wari came into existence through the efforts of the Human Rights Committee in 1968. On the Committee were such people as Walter Slatoff, Alice Cooke, Reuben Munday, Ruth Darling and several students. After several meetings Ms. Darling, then Associate Dean of Students, was chosen by the committee to implement the house and make it function, and this she did accordingly.

This house serves a twofold purpose for minority students: (1) helping them better adapt to the Cornell community and (2) reducing their living expenses. Since the creation of Wari a brother house has been formed, known as Elmwood.

While this is but a glimpse of three of the community's cooperative living units, there are many more with stories of equal achievement.

FUTURE continued from page 3

in a central office. There is always the option that if a student has a hard time selecting a field, he can change advisors until he finds his field of interest. This is especially important in the Biological Sciences. There is also a general shift of students toward the fields of Rural Sociology, Communication Arts and Agricultural Economics. It is fortunate that there are good advisors in each of these fields.

Most interesting of all is the matter of students taking leaves during their four years at Cornell. It seems that even in years back, a female student at Cornell rarely took a leave, and this has remained relatively the same throughout the present. Men, leaving on the other hand, have increased tremendously in number, especially in the past two years. Dr. Everett stated that the Vietnam War was the reason that no students took a leave. He felt that he could not tell a confused male student to take off time when all that would result is his induction into the service. Today, however, more and more students are being encouraged to take leaves, to find out exactly what it is they would like to study.
Safety Division's... Lowell George Views Campus Events
by JOHN JOLLY '75

Behind his desk in G-2 Barton Hall, the face is distinguished and the manner sedate. But beneath the “official facade” lies the dynamic personality of an astute and compassionate administrator who has made things happen.

In 1952, Lowell T. George was selected among forty applicants to become the fifth University Proctor of Cornell, an office instituted in 1910. After a total of 22 years of service to Cornell and the Ithaca community, George, now 62, will retire in June.

Thus will end the eventful career of a man who has been police officer, FBI agent, police chief, and law enforcement innovator, as well as investigator, counselor, and full-time sounding board for the University.

A native of Hornell (population: approximately equal to the Cornell enrollment), George served as an officer in the Hornell Police Department in 1933. As a special agent in 1941, he worked out of the FBI’s Houston, Texas office, and the following year returned to Hornell to become Chief of Police. Ten years later he made his move to Cornell.

As University Proctor, George was on duty 24 hours a day. His office comprised no less than 30 separate “cure and prevention” functions, which included dealing with students who bounced checks, investigating accidents, and acting as a probation officer for City Court.

The proctor was directly responsible for investigating all student misconduct, on and off campus, and helping students with problems that might have led to legal or disciplinary action. Each day he would hear complaints, counsel students, and issue warnings.

During the 1950’s George was well occupied with the handling of misconduct cases, some serious, many not so serious. The 1952 University Proctor Handbook listed such acts of student misconduct as “false fire alarms, discharging firecrackers, throwing water bombs, drunkenness, and gambling.” A walk through campus on any night in 1974, will provide ample evidence as to what the proctor was up against.

But although many of the “crimes” remain the same, the University and its law enforcement agency has seen immense changes since George’s arrival. In 1960 the proctor assumed responsibility for the inspection of Off-Campus Housing for Students. Through the proctor’s office, a full-time inspector engaged in assuring that housing met the health and safety standards set forth by the state, and afforded students a “suitable academic climate.”

The proctor’s numerous duties have since been relegated to the Judicial Administrator and the Ombudsman. Much of George’s counseling duties have been assimilated by the Office of the Dean of Students, which also now supervises the Off-Campus Housing for Students.

In the early years as Director of the Safety Division, George saw reading, writing, and arithmetic lose precedence to protesting, picketing, and “push and shove.” As a novice director he witnessed the upsurge (and later the demise) of the SDS, the anti-war demonstrations in Barton Hall, and the “America is Hard to Find” weekend, celebrated for a certain Father Berrigan.

During the same year, Bruce D. Dancis, ’69, became the first Cornellian to burn his draft card. A year later, there was the Willard Straight take-over and the May Day Anti-ROTC demonstrations.

The Safety Division in 1968 was, structurally speaking, a skeleton of its present self. Then the Controller was at the helm, supported by the Director of Personnel, and a supervisor. The name was changed to the Division of...
Safety and Security and when safety engineer Eugene Dymek came, the division was split. Dymek took over the fire services, industrial safety, and radiological safety, under the rubric of “Life Safety and Services.” George supervised the police department and the building guards, which together constitute the present “Safety Division.”

Two years ago when the new Department of Transportation was created, the Safety Division underwent another realignment, the Traffic Bureau was made a separate entity of the University, and has since moved to Rand Hall.

The University Senate decided it would be beneficial to organize the Traffic Bureau and the traffic controllers under the Department of Transportation. The result has been an operation more conducive to proper law enforcement. “When the Traffic Bureau was part of Safety Division,” says George, “we were giving out the tickets and we were sitting as judge. That isn’t the way it should operate.”

What many people tend to forget is that the campus has the same kind of crime as any municipality or village, and George says the crime rate on campus has increased tremendously in the last five or six years.

A change in the department, stemming from the crime increase, has been the assignment of Detective Fred Rosica to building security. Rosica’s full-time job is to survey buildings, improve security, suggest measures to prevent thefts, and investigate all violations.

Along with the rise in Cornell’s enrollment, which has nearly doubled since the time George was appointed Proctor, there has been a corresponding rise in costs. George attributes the increased cost of operations to increases in salaries, personnel, and the cost of living.

Through the tumultuous times of the 1960’s and the various administrative changes, the attitude of the Safety Division has remained constant. “Our attitude has not changed in any way,” asserts George. “We try to treat everybody in the same way, to be impartial. I think we have a good rapport with the students. I think the students respect the officers.”

Although the Division’s posture has remained static, the sentiments of the students, according to George, have changed considerably. “Students have grown more conservative,” he says. “They are concerned with more important things. Of course the end of the war in Vietnam helped quiet the campus.”

One alteration concerning the officers has been their status. The Safety Division derives its authority from the State Education Law, but in 1970 the Criminal Procedure Code of New York State was rewritten. Consequently, the Safety Division officers, formerly “special deputy sheriffs with peace officer status,” are now “deputy sheriffs with police officer status.” This new code, which prescribes more duties for the Division’s officers, will be made official when the Education Law is changed.

George has recently completed a reorganization of the Safety Division’s reporting and hierarchy relationships. The revision, implemented in January, has improved communications within the department and finalized the formation of 15 individual bureaus and administrative offices, each being assigned special responsibilities.

With the reorganization complete, George envisions even more changes within the Safety Division. “We need to upgrade the starting salary of the officers and provide an incentive for the men to seek college degrees,” he says. The present starting salary for a Safety Division officer is $7,650, which is $1,000 less than every other police agency in the area.

George believes that a college education should be a prerequisite for a campus police officer, and foresees the time when a degree will be required. However, he does not claim it as the ultimate panacea. “A college degree does not make a good policeman, but it does broaden the policeman’s outlook on life,” he maintains. “His experiences as a student make him better able to relate to students and faculty on a college campus.” There is now a movement to increase the starting salary of college graduates and to upgrade salaries after attainment of a degree.

The Board of Trustees has already approved legislation (effective July 1) which permits officers to take courses at Tompkins Cortland Community College and Auburn College in job-related courses. An officer will be reimbursed upon successful completion of a course.

George sees in-service training as a must for the department, and this spring an in-service training program will be organized to complement the officers’ prior training. A rookie now undergoes three months of training in the Division and an additional 12 weeks at the New York State Municipal Training School.

This training program will mark the end of a long series of renovations introduced by Lowell George in nearly a quarter century of service to the Cornell Community. During that period he not only experienced the vast structural and political changes of the University, but was in fact directly involved in many of them. He witnessed the turbulent hours and the placid hours, always emerging as a man of action and accomplishment. The Safety Division has expanded and matured under George’s tutelage, and the changes it has incurred and those carrying ramifications for the future, will remain as appropriate testimony.

PICTURE CREDITS

Cover and page 14—Dept. of Communication Arts; page 3—Debra Lyon; page 4, 12—Cornell University; page 10—Loy Van Crowder, Jr.
Oldest Publication

Summing Up Countryman’s Seventy Years

by KEITH PULVER ’74

“Tо keep former students in touch with each other and the College and to present advances in agriculture, To appeal to students of agriculture and to deal with the social and economic aspects of country life.”

This was the mission of the Cornell Countryman as stated in the first issue, December, 1903; and today, seventy years later, it is still the guiding principle of the oldest, continuous college publication in America, the Cornell Countryman.

That first issue, thirty-six pages from cover to cover, including advertisements, was the product of more than a year of planning and hard work. The size and format of the magazine reflected the tastes and philosophies of the era and closely resembled the Harpers or National Geographic of the day. Advertisements were located in the front and back pages while the editorials, feature articles, and regular departments were located in the center of the magazine.

The articles ranged from “Proper Selection and Breeding of Herfords” to “New Tips on Canning” as well as “Former Student Notes” complete with addresses for renewing old friendships. In addition, regular and liberal use of pictures made the Countryman unique and engaging when it first appeared.

A major format change was unveiled in the October, 1921 issue. The size of the magazine was enlarged to nine by twelve inches. According to the lead editorial from that issue, this change “while perhaps upsetting those readers who have been binding their issues, will provide additional copy space and will attract more advertising since it allows the use of the national standard size electrotypes used by most advertisers.”

The latest change came in October, 1966 when the size of the magazine was slightly reduced to take advantage of the new photo-offset printing process which reduced costs and production time allowing greater concentration on the contents of the magazine.

While the magazine was expanding and contracting physically to keep pace with technology, the contents were also changing to reflect the expanding curricula and interests of the College of Agriculture and Life Sciences. The students, who had always produced the magazine, were becoming more involved in creating the magazine; writing, editing and laying out the publication.

Today the Cornell Countryman is created and produced by the juniors and seniors in the College who are majoring in communication arts. The magazine has become not only a communication device but also a laboratory to train students in the arts (and aches) of publishing a real magazine.

Deadlines, editing, and serving the readership quickly change from classroom concepts to realities in this laboratory. The students who produce your Countryman are constantly learning and applying the latest techniques of magazine publication in a continuing effort to fulfill the “mission” in a professional manner.

So that while the size, style, and the outlook of the magazine have changed to meet this changing world we remain true to the spirit of ’03: providing a link between past, present and future in the pages of the unique Cornell Countryman.
Paul Pentz '69, has been named Vice President of a new company being created by the Jewel Company, Inc. The new company will specialize in what is known as "superstores." Pentz was formerly Vice President in the Turnstyle division of Jewel.

Edwin C. Hadlock '58, of Hammon, New York, has been elected Chairman of the newly organized New York FFA Alumni Association.

Henry L. Wadsworth '56 (M.S. '59, Ph.D. '62), has been appointed Assistant Director of the Cornell University Agricultural Experiment Station. He presently also serves as Associate Director of Cooperative Extension. His new responsibilities with the Experiment Station will be related to the Title V activities of the Rural Development Act of 1972. Dr. Wadsworth is currently the Institutional Coordinator for Cornell University of Title V and he will serve as the Extension and Research Coordinator.

Rex J. Dannon '63, has been named Vice President of Store Operations and James A. Bolonda '65 has become Vice President for Warehousing and Transportation, according to a recent announcement by P & C Foods, Inc. of Syracuse, New York.


Robert D. Sweet M.S. '38, Ph.D. '41, has been elected a Fellow of the Weed Science Society of America. Dr. Sweet is presently Professor of Vegetable Crops in the College of Agriculture and Life Sciences. He was recognized for his outstanding contributions to the advancement of weed science and meritorious service to the national organization of weed scientists and researchers. The Society also announced the election of Sweet as a member-at-large on its Board of Directors for a four-year term during the annual meeting of the Society held recently in Las Vegas.

Advisory Committee Guides College Fund

An Advisory Committee has been appointed by Dean W. K. Kennedy to work with the College in helping to plan, carry out, and evaluate the programs of the College of Agriculture and Life Sciences Development Fund.

The main work of the committee is to help plan new scholarship and innovative teaching programs in the College, and to make long-range development plans for the College, to create "Action for a Creative Future."

Members of the committee include: Earl H. Brown, Associate Director, Resident Instruction, College of Agriculture; John S. Dyson '65, President of Dymer Communications, New York City; Wendell Earle, Professor of Marketing, Agricultural Economics, College of Agriculture; Myron M. Fuerst '29, President, Fuerst Brothers Inc., Rome, N.Y.; Robert J. Haley '51, Director of Development, Cornell University; Joseph P. King '36, Manager, Genesee Regional Vegetable Market, Rochester, N.Y.

Also on the committee are: Robert Ladd '43, President, Research Management Corporation, Washington, D.C.; Raymond J. Lanzafame '74, Student, College of Agriculture; Al Lounsberry '55, Cooperative Extension Agent, Saratoga County, N.Y.; Pamela Murtaugh '72, Cooperative Extension Agent, Suffolk County, N.Y.; David A. Nagel '49, President, Eastern Mutual Life Insurance Company, Passaic, N.J.; Charles E. Palm, Liberty Hyde Bailey Professor of Agricultural Sciences; Charles H. Riley '38, Group Vice President, Distribution, Agway Inc.; John J. Sullivan '62, President, Agri. Systems, Inc., Pavilion, N.Y.; Helen Wardeberg, Chairman, Department of Education, College of Agriculture; Clifford F. Luders '38, Vocational Agricultural Teacher, Elma, N.Y.; Lois Anderson '75, Student, College of Agriculture.

New Film Highlights Agric. Education

A new film titled, "Opportunities in Agriculture and Life Sciences," is now available from the Film Library at Cornell University. The film describes the programs of study available at the New York State College of Agriculture and Life Sciences and careers available to its graduates.

In addition to glimpses of classroom situations, the film also features interviews with alumni regarding how their college training helped them in their career.

A folder describing the film states: Modern agriculture encompasses much more than farming. It is both a skill and a profession and is deeply rooted in the sciences. College graduates with training in agriculture and related life sciences are discovering rewarding careers in business, industry, government research and development, education, communication, pollution abatement, resource development, foreign economic development, conservation and recreation, and many other areas.

This new College 16 millimeter color film is 33 minutes in length, and it is available by writing to: Film Library, Roberts Hall, Cornell University, Ithaca, New York 14850. While the film is free, there is a minimal service fee of $2.00 for each day the film is used, plus a charge for postage.

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People

Helping people to help themselves is Cooperative Extension's primary mission. Assistance is provided through a local professional staff backed by educators, researchers, and program leaders at Cornell University. Their factual, unbiased, and practical information is the basis for decision making and skill development. Individuals and communities are thus able to identify and understand their problems and needs and seek solutions through information in the public's interest.

Partnership

Federal, state, and county governments form the partnership arrangement whereby Cooperative Extension carries new knowledge and research-based information from Cornell, the land-grant university, to the people of New York State. Educational resources made possible by the support and cooperation of each partner are available in communities across the state through Cooperative Extension Associations in 56 counties and five community offices in New York City.

Programs

Practical, problem-centered programs that advance the well-being of the individual, family, and the community are the hallmark of Cooperative Extension's assistance. While constantly upgrading its long-time commitment to present programs, Cooperative Extension continues to deal with a broad range of social and economic problems related to the needs of all New York State residents. New and evolving programs encompass such areas as environmental quality, population affairs, family day care, community development, nutrition education, comprehensive manpower, consumerism, and youth development. No matter what the focus, a major feature of these practical programs of the people is the guidance local citizens provide in establishing priorities to fit their immediate needs and long-range goals.
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Journal Reveals . . .

Living The Farm Practice Requirement

by PRISCILLA MAY '75

There are few vestiges remaining of the farm practice requirement at Cornell; yet it is not forgotten. Farm practice journals written by the students while fulfilling their practice requirement still exist and make intriguing reading for those interested in this aspect of College of Agriculture history. Journals, a part of the requirement, included both a record of the students' experiences and the hours spent at work as well as hidden insights into the attitudes and moods of the students at the time.

Recently the University Archives acquired a copy of the journal "Farm Hand at the Meridale Butter Farms," written by Leonard K. Elmhirst, '21, during the summer of 1920. Elmhirst, an economics student, eventually became the husband of Dorothy Whitney Straight after her first husband, Willard Straight, died in World War I. Together they are perhaps most readily known for their donation of Willard Straight Hall to the Cornell campus.

Elmhirst spent his summer as a laborer on a large dairy farm in the Catskills. Like many students with little or no farm experience, he approached his summer practice apprehensively. In his journal he relates: "... as an M.A. from Cambridge with an Honours Degree in History, 3rd class, I was a complete greenhorn on the farm and extremely nervous of what trouble I was likely to run myself into at the Meridale Farms. . . . I knew too with what natural suspicion a professional staff might certainly regard a college student who was, in this land of promise, just a 'Limey' on approval . . . ."

Yet Elmhirst was not long in gaining approval, both from the farmhands he worked with and the professionals he worked for. He quickly gained rapport with his fellow workers by establishing himself, not as Leonard K. Elmhirst from Cambridge, but rather, "Joe." "Asked my name in the barn, I was put in a quandry: Leonard simply does not work in the U.S.A. It was neither short nor snappy enough in that hustling country and surnames were out. There was already a Len in the barn so, from the first, my answer to Steve was: 'Call me Joe.'"

At the time of Elmhirst's arrival, the Meridale Butter Farm was in the midst of preparation for a big sale in (Continued on page 14)
Learning By Doing...

Sugarbush Is Their Classroom

by ANNE I. RABUSHKA '74

The maple tree is a teaching aid in one of Cornell's new mini-courses. The course, Natural Resources 205, covers the principles and processes of maple syrup production from sap collection to syrup bottling. This unusual course meets for seminars and field work on appropriate, selected days during the maple season and offers one unit of credit. The student's laboratory is the Arnot Forest preserve.

The course is being taught for the first time this spring semester by Dr. Robert R. Morrow who supervises the maple research program in the Natural Resources Department of the College of Agriculture and Life Sciences. However, as he says, "Mr. Alfred Fontana, resident manager at the Arnot Forest, is a teacher as much as I am. He does all the instruction in the actual tappings and syrup making; I cover the theoretical and classroom aspects."

Professor Morrow is no stranger to this unusual field of study. He began his maple syrup research in 1951, primarily on the relationship of sugar percentage and amount of sap to the size of the tree and its tree crown (the branching area). However, Professor Morrow claims that the results were not highly dependable. "Our studies involved too many extraneous conditions and factors producing inconsistent data." Subsequent work centered on the actual production techniques. "We wanted to obtain the highest quality syrup possible."

Dr. Morrow explains how maple sap is converted to syrup through the evaporation process.

Many of the recent improvements in maple syrup production techniques were developed here at the Cornell facility. These included finding the most successful heating methods for producing high quality syrups (these syrups demand a constant flame for an even breakdown of large to small chain carbon molecules), the optimum number of tap holes per tree, and of most importance—the development of the tubing system of sap collection.

This work has been the major effort of the maple syrup researchers since 1960, according to Professor Morrow. No longer can the picturesque wooden buckets be seen decorating the trees in the maple forest. Instead, yards of clear plastic tubing string their way between the trees, connecting each tree spile to the main vat in the sugarhouse. There are 1500 tap holes at the Arnot Forest, approximately one tap hole per tree, making the network of tubes quite complex.

Cornell employs maintenance men for the sugarbush, but a 250-tap area is set aside for the mini-course students. Professor Morrow explains that the only form of reasonable study in this field is "to have the students work in an ongoing sugar operation." They install some 250 tap holes, string the tubing, and check over sections that have already been strung. The students also assist in the evaporation and canning processes and in making measurements of total sap collected and amount of syrup produced. "We also have them do some of the dirty work," continued Professor Morrow. At the end
of the season (the season lasts from March through the middle of April) the students must take down the tubing and clean it.

"The tubing system," claims Professor Morrow, "requires constant maintenance." Not only does it have to remain clean, the growth of microorganisms along the lines will produce inferior syrups, but rodent, weather, and human-damaged lines must be repaired. "These trouble areas are easily found through the analysis of sap production figures — a reduction in one particular area signifies some sort of breakdown," explains Professor Morrow.

Although this sap collection system has its own problems, it is much more highly efficient than the old methods. Professor Morrow is quite enthusiastic about the process and optimistic about its future. He says that spickets are inserted into the trees with drop lines that connect to the main line tubing. These tubes are all suspended in the air and strung with a slope in the line; a ten percent slope and 80 tap holes per line have proved to be the optimum conditions. The weight of the sap flowing down the tubing creates a vacuum which then pulls more sap out of the tree.

However, the size of the tubing must be matched to the flow rate. If the tube is too wide or narrow, or the slope is too great or small, the natural vacuum disappears. In these cases, pumps can be used to create artificial vacuums. Only after carefully studying the tree and land conditions can the appropriate adjustments be made. With a proper tubing network, up to twice as much sap can be collected at any one time than with the old methods.

Although the maple syrup production course and much research is based in the Arnot Forest, Cornell researchers have two other areas for replication of experiments. These are the Cornell-Uihlein Project at Lake Placid and the Miner Institute in Chazy, N.Y. The differing conditions in these three areas are important factors in the evaluation of new syrup production methods.

The Lake Placid facility has also been used for extension education. The Cornell workers have been making a concentrated effort to show maple syrup producers the feasibility of using plastic tubes and lines, in cold, high elevations. The Cornell-Uihlein sugarbush has been used as an effective demonstration area during the past few years.

Cornell, as an institute of learning, has been reaching out to all parts of the population. Many diverse facets of education can be found, from highly theoretical matters to practical applications of that study to the everyday world. The Cornell maple syrup experiments have helped the industry to reach higher production goals and better quality syrup. The maple syrup course is helping students to better understand an unusual, yet practical, part of the world around them.
After Graduation...

Ithaca Attracts Former Students

by SUSAN PETERS '75

Talk to a freshman or sophomore and he will probably tell you that he can't wait to graduate and get away from Ithaca. But somewhere toward the end of junior year one's ideas begin to change. As a second semester junior one begins to realize that there's only one more year left and then... and then, what? Graduation, long equivalent to freedom, begins to be associated with other things. It becomes a border; on one side is four years at Cornell, while on the other side— the unknown.

Many graduates find Ithaca so appealing compared to other alternatives that they choose not to leave after all. They may give up the opportunity to get a well-paying job in another city to stay in Ithaca where the jobs aren't nearly as good. It is not unusual to meet someone who graduated a year or two ago shovelling snow on campus or working downtown in a clothing store.

I asked a friend, a Cornell alumnus who is working as a janitor, why he stayed in Ithaca: he offered me several good reasons. As I have mentioned, Ithaca most certainly offers security because it is familiar. After spending four years in Ithaca, one knows his way around and feels at ease here. But what are the real reasons one might have for staying?

One fairly obvious reason is that one gains friends here. Frequently couples meet and fall in love while at school, so naturally if one person graduates before the other, he might want to wait until they can both leave. In addition to having good friends here who are younger than he, my friend told me that he never had time to enjoy Cornell while he was in school. I gave this some thought and had to agree; how many times have I stayed at home to study for a test when I might have been out enjoying the unique things Cornell and the

Ithaca community have to offer. Ithaca has the advantage of being a small city which many people from larger cities appreciate. Yet it offers a wide variety of things to do. This is unusual for a city of this size. Having two colleges, Ithaca has cultural events which can't be found anywhere else in a big city. There are also opportunities to use the facilities provided by Ithaca College and Cornell. There are athletic facilities and libraries which might actually be enjoyed when used for pleasure rather than for a research paper. As contradictory as it may seem, staying in Ithaca after graduation is a chance to fully appreciate college life.

Ithaca itself provides many with reason not to leave. The Ithaca area is truly lovely. Here one finds Cayuga Lake, Taughannock Falls, Buttermilk Falls, and Robert Treman State Parks, in addition to spectacular gorges within the city itself. It clearly has all the advantages of a rural environment in addition to offering many of the features of a big city.

Because so many graduates choose to stay in Ithaca, there are relatively large numbers of young people here in addition to those who go to school. Staying here is therefore self-perpetuating. Many people stay because there are so many others here of the same age. Ithaca accepts them and offers what my friend calls, a "hassle-free" environment. Collegetown is a part of Ithaca's appeal and has its share of alumni "hanging out" with everyone else.

There is no doubt that college is an important part of one's life. It marks a time of intellectual growth and development as a person. As much as I have disliked Cornell at times, I am beginning to realize that Ithaca will always be a special place for me and although I may not choose to stay, as my friend has done, I will always come back.
Summer of '74 . . .

Programs Help Student Plan Future

by LESLIE CANFIELD '75

This summer, as in the past, students from universities pour back into the cities with the same goal — to seek employment in the job market. Many will spend the summer unemployed. But how do those lucky students manage to get good jobs, with high salaries? The College of Agriculture and Life Sciences is helping students to organize strategies that utilize the best possible opportunities.

The ideal job for a college student is one which is directly related to his field of specialty. For example: a student interested in medical school should try to work in a hospital, for a company doing labwork, or in a clerical job related in some way to medicine. However, when one considers the practicality of salary versus experience, most students will choose to make money. This is where the problem begins.

In order to get an interesting and well paying job, a student must start early. It is important that he or she not depend too heavily on any agency to find a job. Good jobs are usually found by the student, and many of these are purely by accident. Imagination is the key to finding a good summer job. If any possible lead, however remote, is found, the student is well-advised to follow it up. The next step is to talk to the person who may be the prospective employer. Personal contact is probably the best means of gaining employment. When an employer is confronted face-to-face, he is less likely to give the student vague information about job possibilities. If a job for the summer does not materialize, there is always the chance of future employment.

The Office of Student Advising in Roberts Hall tries to assist the job-seeker by helping him to identify potential leads. It is up to the student to follow through. If there are special openings, the Office of Student Advising publicizes them. However, it does not engage in contracting an agreement with any particular company as far as the employment of students is concerned.

The College of Agriculture has, however, set up a contact program, which provides sophomores and juniors with initial input in their potential fields. They meet and work with various companies over their vacations. If they are successful in this contact, they have a definite possibility for a summer job. The future hope for this contact program is to establish a continuous flow of students into these agencies. That is, if a good impression is made on a particular agency, it is hoped that the agency will look to Cornell for additional job candidates.

The College of Agriculture is also looking into the co-op program for students who know in which direction they wish to go. The program entails spending two semesters of full-time experience in the student's field. This means spending one extra year to graduate. However, it supplies a promising future if the company and the student are compatible.

Others may take an alternative, such as a study program. These are available at many universities in this country as well as in Europe. There is an increasing number of summer-research study programs available. At Cornell, this shows up best as a summer internship. For example: a student in Agricultural Economics may be exposed to the banking industry for two weeks to give him a picture of finances. He does not get a salary, but receives credit and an indication as to whether he is really interested in finance. Another type of internship is in farm practice. Certain farmers in the area depend on Cornell to channel students to them for summer help.

The fact remains that summer jobs have the potential of becoming permanent jobs. Thus, any sort of experience in the business field, even if it is not the student's major, is a potential asset. The establishment of a work record can only be beneficial in the long run. To a potential employer, having been part of any business interaction indicates that the student may be able to adapt to a variety of new situations. This could be a deciding factor in the successful student's future.
College of Agriculture and Life Sciences Fund

Ninety-six students have benefited directly from the Fund by receiving scholarship aid.

New Scholarship Funds Being Established at the College of Agriculture and Life Sciences

E. R. Smith Memorial Scholarship
A scholarship honoring E. R. Smith, a longtime director of Eastern Milk Producers’ Cooperative was established by friends, colleagues, and organizations served by E. R. Smith. The award will be made to students enrolled in Agriculture and Life Sciences with preference given to students from Eastern Milk Producers’ Cooperative families.

Henry Roberts Memorial Scholarship
A scholarship honoring Henry Roberts ’68, was established by friends and neighbors. Henry Roberts was Vice President of the Chemung County Farm Bureau. The scholarship will be given to juniors and seniors studying dairy science at the College, with preference given to students from Chemung County, and second preference to students from Westchester County.

Anson H. Rowe Scholarship
The College received a bequest from the Anson H. Rowe Estate to be used to establish scholarships in the communication arts program in the College. The scholarships are to be awarded to a junior and senior, majoring in communication arts.

New York State Grange Scholarship
The New York State Grange, as part of their 100 year anniversary, are in the process of establishing a scholarship fund. This scholarship will be given to students who transfer to Cornell from the six Agricultural and Technical Colleges of the State University of New York.

Captain Samuel Hendrickson Memorial Scholarship
This scholarship was established by the 5-H Acres School of Riding in honor of Captain Hendrickson. It will be awarded to a former 4-H member in New York State who is studying animal science at Cornell.

Pat King Memorial Scholarship
A scholarship is being established by friends and colleagues of the late Pat King ’49. The scholarship will be awarded to students in the College who excel in the field of general agriculture.

Estate of Marcelle P. Morgenthau
The College received a gift from the estate of Marcelle P. Morgenthau to set up two scholarship programs; one will be a graduate program to a student pursuing graduate work in agricultural or rural finances. The other program will be an award to a student who is in his or her junior year, with a career goal in agricultural finances.

Myron Lacy — John Miller Scholarship Fund
Friends and colleagues of Professors Myron Lacy and John Miller have established a scholarship honoring the long-term service of these two men to the Beef Cattle Industry in New York State. The scholarship will be awarded to students who are studying animal science with an intent on entering the beef industry as a career.
The Fund has helped finance innovative teaching programs.
1973 Contributors

Founders Roll ($5,000 over 3 Years)
Jesse Bontecou '52
Richard C. Call '50
Robert V. Call, Jr. '50
M. P. Catherwood '50
Mrs. Hollis E. Cornell '39
John S. Dyson '65
Myron M. Fuerst '29
Mr. & Mrs. Sayre MacLeod '62
W. Stephen Middaugh '62
(Posthumously)
Aaron M. Nadler '17
David A. Nagel '49
George W. Perkins, Jr. '49
Robert A. Polson '49
Mr. & Mrs. Edward C. Raney '49
Senator Wm. T. Smith II '38
John J. Sullivan '62
Henry & Mildred Uihlein '62

Charter Roll ($1,000 per year or $3,000 over 3 years)
Morton Adams '33
Roscoe C. Edlund '39
William F. Fuerst, Jr. '39
Harold J. Humphrey '17
W. K. Kennedy '17
Joseph P. King '36
Robert D. Ladd '43

Hundred Up Club ($100 and up)

Alumni and Friends

Raymond Asen '56
Benjamin Aborn, Jr. '18
Donald C. Ackerman '57
Dorothy Ackerman '58
Michael T. Adams '62
Michele Adams '65
Allen J. Albright '44
Stanley M. Anderson '49
Judith Andurcik '68
Beatrice Apicella '48
Joseph N. Apicella '49
Charles G. Ashe '35
Carl A. Bache '59
Ned W. Bandier '49
Lynn F. Bane '39
John Baran '50
Richard C. Barnholdt '47
John R. Batcheller '70
Bruce R. Bauer '71
William E. Bean '51
Harold W. Beolte, Jr. '64
Mitchell H. Bender '64
Andrea S. Bergstrom '71
H. P. Berna '51
Stanley Z. Berry '52
Richard J. Bird '69
Frederick Herman Boucher '40
Roger E. Bradley '41
Ronald C. D. Breslow '53
Norman B. Brieffield '27
Norman Broder '44
David S. Brown '68
Lawrence E. Brown '57
Lossing J. Buck '44
Bruce M. Budman '41
Burton C. Buell '37
Charles P. Buish '69
Thomas E. Burger '68
Clarence M. Burgher '56
Glady's Burzycki '43
Frederick A. Buschner '48
Wendell D. Call '62
Alvin F. Carruth '53
Stuart A. Child '35
Richard A. Chordash '69
Richard A. Church '64
Benjamin E. Clark '38
Herman L. Cocchetto '46
Norman D. Coe '69
Gary E. Coene '67
Arnold D. Cohen '50
Frederick P. Corey '49

Alumni (up to $99.)

Raymond Asen '56
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Donald C. Ackerman '57
Dorothy Ackerman '58
Michael T. Adams '62
Michele Adams '65
Allen J. Albright '44
Stanley M. Anderson '49
Judith Andurcik '68
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Joseph N. Apicella '49
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Norman D. Coe '69
Gary E. Coene '67
Arnold D. Cohen '50
Frederick P. Corey '49

Ezra Cornell '70
Henry J. Coufos '72
Roger Cramer '34
Roy P. Crocker '15
Lincoln E. Croulshank '27
Annamarie Czorz '69
Merrills L. Dake '26
Donald J. Danila '69
Lawyer N. Davis '57
Philip H. Davis '50
Walter G. Davis '58
Sylvia DeAlmeida '49
Evelyn Delamar '26
Benjamin De Leon '34
Frank G. Dennis, Jr. '54
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Harry W. Dudley '39
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Gabriel T. Durkac '67
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Rodman N. Fellows '35
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Jules Fixe '41
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Gilbert H. Flint '40
Roy J. Foltman '55
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Gibs C. Foster '52
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Clifford A. Gale '66
David L. Gale '46
Thomas H. Gallup '46
James H. Gallup '51
Joseph B. Gellert '68
Abraham George '33
Robert W. Gibbs '49
John E. Gilmore '24
Richard T. Girards '65
Frank W. Goetschius '53
William Gold '43
Philip R. Goodrich '62
Leonard Gorbaty '51
Peter A. Gordon '71


When it comes to sharing your time and experiences, what do you do for your little brother? Well, much depends on what imagination and creativity generate when nine-year-old kids and twenty-year-old kids get together.

Students in the College of Agriculture and Life Sciences as well as in the other schools of the University are volunteering their time and energies in Ithaca's Big Brother program. In devoting a few hours a week with a local youngster, a big brother tries to fill some gaps in the child's development. Often no formal program is planned. Much of the youngster's joy comes from being with his older brother, perhaps just fooling around and maybe even engaging in some man-to-man talk.

Shown here are typical scenes during an afternoon's outing with big brothers Dick Simon and Chip Gregory, Cornell juniors. Little brothers Stanley Oliver and David Martinez find lots of outlets for excess energy in running, jumping, racing, and kite flying. Overall is the happiness that comes from sharing your fun with someone who cares about you.
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Practical Courses...  
Students Study Human Relationships  

by LOY VAN CROWDER, JR. '74

It has often been said that a college education, with its classroom format, is divorced from reality. Many educators, administrators, and students have expressed concern about the lack of application of classroom concepts to "real world" situations.

The Department of Human Development and Family Studies, New York State College of Human Ecology, offers an exception to the trend of "ivory tower education" with undergraduate courses that take education out of the confines of the classroom. Under the supervision of Mrs. Eleanor D. Macklin and Dr. David Roy, Human Development and Family Studies (HDFS) presents a series of three courses, dealing with adolescence and related problems, that combine classroom lectures and participation with practical fieldwork.

Students in Adolescent Development in Modern Society, HDFS 317, are introduced to adolescent behavior, and given a chance to work with that age group three hours a week. Students receive field assignments in one of the following programs: (a) going to South Lansing School for Girls to provide evening recreational activities or to Austin McCormick Rehabilitation Camp for Boys to provide remedial tutoring; (b) being assigned a "teen tutor," a local high school student who introduces the Cornell student to teen life in Ithaca; (c) working at Open House, a 24-hour downtown crisis counseling center for local youth or tutoring at Ithaca's DeWitt Junior High School.

After each visit, students are expected to write a "running assessment record" or progress report, assessing their own feelings in relation to the behavior of their adolescent friends. Mrs. Macklin, who established the practical orientation of the course in the spring of 1969, says she is "convinced that if students are actually, physically, and emotionally having to interact with adolescents it will be more meaningful and realistic."

In Social Policies and the Problems of Youth, HDFS 318, students go into the community in research teams to find out what the needs of youth are and what is done to meet these needs. The objectives of the course are to examine the position of young people in contemporary society and the policies, practices, and institutions that deal with delinquents. At the practical end, the student gains the experience of working on a community research project. A "movable seminar," a field trip to Washington, D.C., acquaints students with a number of agencies active in the field of youth development and delinquency prevention.

Practicum in Working with Adolescents in Trouble, HDFS 319, the last in the series of undergraduate ado-lescent courses, is an extensive field work experience. A minimum of six to eight hours per week is spent at Austin McCormick Camp for Boys, South Lansing School for Girls, or Tompkins County Probation Department under the supervision of the cooperating agency staff. An emphasis is placed on learning and practicing specific skills of interviewing and counseling that are useful in working with adolescents in trouble. This last undergraduate course is a prerequisite to HDFS 420, Advanced Field Study in Adolescence, a 12-15 credit graduate internship in youth work.

The guiding concept behind the adolescent courses is increasing awareness and responsibility on the part of students by intensive interaction with young people in real-life situations. Mrs. Macklin attributes the success and popularity of these courses to their practical orientation and to the closeness in age of college students to adolescents. It is rare indeed that courses at the undergraduate level offer Cornell students an opportunity to learn, to serve, and to grow in personal maturity in a practical dimension.

"It is rare indeed that courses at the undergraduate level offer Cornell students an opportunity to learn, to serve, and to grow in personal maturity in a practical dimension."

The proper use of library facilities is among the many outside tutoring services Cornell students offer members of Austin McCormick Rehabilitation Camp for Boys near Ithaca. Such assistance is part of a course designed to provide "real world" situations for those planning to enter fields devoted to helping fellow human beings.
Ben Mintz Reviews Sports Highlights
by KENNETH RICHARDSON '75

When this reporter recently visited the Office of Sports Information in Teagle Hall he made an immediate discovery: If there is anything you want to know about sports at Cornell University that has happened in the last 35 years, ask Ben Mintz. Ben has been on the Cornell scene since 1939, his freshman year as a Cornell student. For the past 25 years he has been the Director of Sports Information.

In 1942, Ben's first year on the job, he was an assistant to Mr. B. M. Clarey. Ben was still a student then and could work only part-time. Mr. Clarey could work only part-time too because he was also a reporter for the Ithaca Journal. Ben went into the service in 1943 and returned in 1946 to work full time as an assistant to Mr. Clarey. In 1949 Mr. Clarey left to devote his full time to the Journal. Ben was then appointed Director of Sports Information and he has held that post ever since.

Over the 28 years that he has been a full-time employee, Ben has seen many exciting and thrilling moments in sports.

"In football," Ben stated, "my most thrilling moment was watching Cornell beat Michigan back in 1951." Michigan was the Rose Bowl winner that year and defending Big Ten Champion.

"The crowd that day," Ben exclaimed, his voice reaching a slightly higher pitch as he recalled the excitement of the game, "the crowd that day was the largest in Schoellkopf history. Over 34 thousand people showed up.

"An equally big thrill," Ben continued, "was watching Ed Marinaro run for five touchdowns in a 41-24 win over Harvard in 1969.

"And watching Marinaro through the years, breaking all those records, were tremendous thrills too."

About the time that Ben was appointed Director of Sports Information, basketball was a big sport. "In the 40's and 50's the team was so good that it drew 5,000 to 7,000 people to Barton Hall."

In the 1953-54 season the basketball team won the Ivy League title in a playoff game against Princeton by a 44-42 score on a last second turnaround jump shot by Ithacan Henry Bumcom.

Ben remembers his biggest moment in hockey occurring during the 1969-70 season. "That whole season was a great one for me," he said, "especially when we won the NCAA title at Lake Placid."

Hockey wasn't always the big sport around campus that it is now. Cornell stopped competing in 1947 because of the difficulty in getting practice time. Lynah Rink wasn't built then so the team used Beebe Lake for games and practice. The weather proved too inconsistent for hockey, being perfect one day and terrible the next. Finally, in 1957 the rink was completed and Cornellians could watch hockey indoors.

Most students don't know this, but the first game ever played in Lynah Rink was between the New York Rangers and the Rochester Americans. The Rangers won 7-3 with Lorne (Gump) Worsley as goalie. Cornell has since had a fine hockey program and, along with the other sports, has produced some fine athletes.

"The best all-around athlete I've seen at Cornell," Ben stated, "was Dick Meade ('56). No question about it. He was an outstanding halfback, a baseball infielder, and a starting backcourt guard.

"There are some very outstanding athletes at Cornell today, too," Ben noted. "But if I had to make a comparison between today's athlete and the college athlete of the 40's, I'd have to say that today's college athlete is more concerned with external affairs. Athletes in the 40's concentrated more on their studies and athletics as a group than I think they do today. But today the athlete is more socially aware, more politically aware, and more serious about his schoolwork because the world is much more competitive now. All this is good, and it isn't to say that today's athlete isn't as good as 25 years ago. He's every bit as good; in some respects better because he's better coached, better equipped, and he's better trained."

Concentrating on sports is something that Ben Mintz has done for years. He credits Bob Kane, Dean of Athletics, with making his career here even more enjoyable. He also enjoys his relationship with Jon Anderson, present Director of Athletics. The Sports Information Office is in good hands with Ben Mintz on the job.
Anderson In Charge . . .

Campus Cinema Attracts Students

by RICHARD WAGNER '74

The movie industry has fallen on hard times according to most theater owners. Their theaters stand empty most of the week, or else they have switched to X-rated films in an attempt to bring back an audience. Why are the theaters on the Cornell campus nearly full six nights a week? The answer is the Cornell Cinema, an organization which has taken Cornell from movie chaos to the position of having one of the most respected film series on any campus.

In the spring of 1970, the film program on campus had reached a breaking point. The film schedule was chaotic, with a number of different groups competing against each other for the audience. Alpha Phi Omega and the Theater Department were the two largest competitors and cooperation between them was minimal. At several points the cooperation was so bad that both groups booked the same movie for the same weekend. Needless to say, everyone suffered. The students could never be assured of quality or of a varied program. The Theater Department was losing money due to the fact that their films were not as commercial as the Alpha Phi Omega schedule. It was obvious to all that things could not continue this way. Accordingly, a committee was formed under the chairmanship of Prof. Charles Russell of the Department of Communication Arts to study the problem and to come up with a recommendation.

The committee's report was accepted, establishing the guidelines under which Cornell Cinema was formed. The proposal was to combine the schedules, making the operation financially viable and maximizing the quality of the films. Cornell Cinema was placed under the umbrella of University Unions but was made an unsubsidized branch. Beyond laying out the financial foundations and the distribution of the equipment, the report failed to state just how the Cinema would be formed and run. The man hired to answer this question was Jack Anderson.

When 25-year-old Anderson entered his new job, he was given only a small office in the Straight and a part-time secretary. The amount of work Jack handled in those days is now handled by a good-sized staff of paid students and part-time employees. There were no guidelines and the subsidies previous organizations had received had vanished. All that was apparent was that there had to be a film schedule for the fall.

Jack decided to try and maintain some of the structure of the Theater Department's organization. This involved making some of the jobs, such as head projectionist and house manager, paid positions. Based on an agreement with APO, the projectionists would be paid while the ushers worked on a volunteer basis. However, this did not work out, as the volunteers found trying to work on a six-nights-a-week movie schedule incompatible with their studies. Accordingly, Anderson made the decision that the organization would be run like a business, with all employees being paid.

As with any new business, the Cornell Cinema made a few mistakes at first. The early bookings were scheduled with more showings than there was audience demand. After a short time, Anderson realized that the Cornell community was only interested in very commercial films. Therefore, he had to make the choice between more artistic films and large-selling commercial pictures. The choice was mandated by Jack's position: the Cinema is not subsidized, so it must make money. Soon Anderson became aware of what the Cornell community would pay to see. The schedule now includes two shows only, on Fridays and Saturdays.

Today the Cornell Cinema functions in a class by itself. Many film distributors feel that it is one of the finest film programs run by any college. The Cinema itself is still headed by Jack Anderson, while many of the important duties have been delegated out to students. Commercial appeal is still a necessary part of the Cinema's films, but now Anderson is able to show more noncommercial films as well.

The Cornell Film Club was established by Anderson in 1972 to provide the campus with an opportunity to see films that have artistic merit but limited audience appeal. This semester another avenue has been opened; through a grant from the N.Y.S. Council on the Arts, Jack is able to show rare, good-quality films on Wednesday nights for free. Cornell Cinema is now a profit-making organization which has surpassed the commercial theaters downtown in appeal. Over the last summer, Anderson was able to bring to Ithaca the area premiere of several major Warner Brothers films. Continuing this in his regular schedule, he brought "Last Tango in Paris" to Ithaca last semester.

Cornell Cinema has developed from a small office in Willard Straight Hall to one of the most respected organizations on campus. The Cinema calendars for each month disappear as soon as they are put out, and decorate the walls of many Cornellians' apartments. Jack Anderson is the man primarily responsible for taking this important student activity from a state of chaos to one of a smooth-flowing business.
As an extension of classroom activities centered around learning how people relate to one another, a number of Cornell students undertake a variety of tasks involving volunteer services in the Ithaca community.

Much of the coordination of these volunteer projects is handled through CIVITAS (Cornell-Ithaca Volunteers In Training and Service), a campus-based organization that functions as a clearinghouse for programs that need student assistance. But the organization does more than simply matching volunteer openings to the available manpower.

Most important, it operates in an educational framework that provides opportunities for students to explore the realities of social service work and to help them examine future career possibilities. By being placed in a real-life environment, students are able to discover exactly what is needed by way of individual and group action to bring about improvements in a community. These experiences, dealing with social problems on a first-hand basis, also lead to a better understanding of what it takes to build effective institutions that truly represent people and respond to the influences that bring about change.

Cornell volunteers are not new to the Ithaca scene. Records indicate that students have provided assistance to the community since 1869. In that year a group began working with inmates of the local jail through a Christian association. Volunteer services were more formally organized in 1919 with the creation of CURW (Cornell United Religious Work). CIVITAS, which now directs many of Cornell's student volunteer programs, succeeded CURW in 1971.

Through the many volunteer opportunities in the Ithaca area, students may work in local schools, assist at day care centers, or participate in Big Brother/Big Sister relationships. There are also opportunities to contribute to the comfort and happiness of the mentally ill, the elderly, and the physically handicapped.
three weeks. Elmhirst soon was given the position of helping Mr. Parrish, the expert fitter who had been hired for the occasion. The work was not easy. Elmhirst was in charge of nineteen calves and at times it was questionable just who was in charge of whom. "That same afternoon I was ordered to halt up each of my young charges in turn and take them out to the field for exercise. What an illusion! No sooner had I persuaded each young bull to leave the barn than it proceeded to take charge and me for a ride. 'Skittish' was the word so that by the time all were home and shipshape, I was entirely out of breath. It was by then 6 o'clock and not the regulation closing time 5 o'clock."

On another occasion, he was given the job of holding the animals while they were trimmed. "Holding was a precarious job. Now and then there were desperate struggles up and down the slippery barn floor. One young lady dragged me all the way up the centre of the barn in an attempt to bolt back into her pen. Another turned round on me and, with head and sharpened horns lowered, chased me to the door. A third managed to break the rim of my glasses with her horn."

Yet Elmhirst managed to take it all in stride, pausing only momentarily to consider the situation. "I realised soon that I did not really have the right nature myself for dealing with so many witless animals. I tended to expect them all to behave like reasonable beings. 'Treat a cow as you would a lady' was written above the old cow. How did one treat a lady? I wasn't really sure, but I would wonder at times whether one of my ladies did not deserve a really good clout."

Despite his lack of experience and skills, Elmhirst proved to be a valuable asset to the Meridale Butter Farm during the sale. When the sale was finished and he was ready to leave the farm, Elmhirst was surprised to receive a check for forty-two dollars for his help — quite a bit more than the fourteen he had been offered on his arrival. Mr. Parrish explained to him, "I put in that first Monday morning a claim for your services as soon as the office opened. I'd given you a final once-over after you volunteered to help with that sick cow on Sunday. . . . When all was over yesterday I asked what they thought might be a fair compensation for your services. 'Oh,' Dutton [the manager of the farm] said, 'he came to us as a student to get experience. After all he's had his board and lodging free.' 'Student he may be,' I had said, 'but how would I have got along without him as a member of the team?'"

Elmhirst ends his journal with his leaving the farm. It was most certainly an educational experience — the kind one doesn't receive in a classroom, but is acquired only through first-hand experience. On this one point Mr. Parrish agreed. "I [Elmhirst] thought by this time I might dare to sound out Mr. Parrish on what he thought about State Colleges of Agriculture . . . ." Did you ever get a chance to look at the Cornell University herd of Jerseys?" I asked him. 'No, I never had much use for any of those university herds. In the Ring we always feel quite safe when we come up against some entry from a college or from a university. They never win. They don't have the know-how. I get sick of boys, often from the city, who having completed their course at a college, apply to me for herd managerships . . . . Joe, you're setting about learning the job in the only right way. You will learn, cannot help learning. But with only a degree from some college course, and without actual experience, they're no bloody good.'"
Allen W. Matuszczak '72, recently joined the staff of the New York Farm Bureau as a regional fieldman for the Catskill area.

Martin J. Sennett '70, has been named regional director of the Mid-Atlantic area for Cornell's Public Affairs Office. He is located at Rosemont, Pennsylvania. Robert Berube '66, is also in the Rosemont office, serving as regional director for the West Coast area.

Al H. Wegener '56, has joined Keenan & McLaughlin, an advertising agency in New York City. Until early this year he was Vice President of Cunningham and Walsh and the creative and marketing supervisor on the CIBA-GEIGY Agricultural Division account. At Cornell, Wegener was a major in the Department of Communication Arts and editor-in-chief of the Cornell Countryman.

Prof. Ernest F. Schaufer '48 (M.S. '52), of the College of Agriculture and Life Sciences was honored recently by the Federated Garden Clubs of New York State. He received the Alice Doscher Horticultural Bronze Medal, an award reserved for an individual of professional status for outstanding achievements in the science or practice of horticulture.

Ozbun Appointed To Extension Post

Jim L. Ozbun, chairman of the Department of Vegetable Crops at the N.Y. State College of Agriculture and Life Sciences, has been appointed associate director of Cooperative Extension.

In announcing the appointment, David L. Call, director of Cooperative Extension, said that Ozbun will be primarily responsible for the commercial agriculture program. Director Call pointed out that Ozbun comes to Cooperative Extension with a strong administrative background and a thorough knowledge of commercial agriculture, particularly the New York situation.

Ozbun succeeds Prof. William G. Merrill, a member of the College's Department of Animal Science, who is returning to his department to continue his academic pursuits.

Donald H. Wallace, professor of vegetable crops and plant breeding, will serve as acting chairman of the Department of Vegetable Crops.

Hinman Foundation Supports College

The Grove W. Hinman and Agnes M. Hinman Charitable Foundation of Hamilton, New York, has made a $5,000 grant to the College of Agriculture and Life Sciences.

The annual Grant will be used to establish scholarships for students attending the College from Madison County and Central New York.

The Hinman scholars will be selected on scholastic merit, financial need, and character, and awards will be made to students studying Agricultural Science.

State Dairy Princess To Enter Cornell For Ag Engineering

Pursuing Ezra Cornell's promise to provide an institution "where any person can find instruction in any study," Miss Melody Hector will be the first woman to enroll in the professional agricultural engineering program next fall at Cornell University.

Miss Hector of Swan Lake is currently serving as the State's Dairy Princess.

Leonard W. Feddema, director of admissions at the College of Agriculture and Life Sciences, said that her choice of major was, "quite natural since she is a whiz at math and has constantly worked around machines at her Sullivan County farm home."

The professional agricultural engineering program, jointly administered by the College of Agriculture and Life Sciences and Cornell's College of Engineering, requires a sincere interest in a rigorous engineering curriculum.

Ag Alumni Combine Annual Meeting With Alumni Breakfast – Saturday, June 15

The Alumni Association of the College of Agriculture and Life Sciences is planning to hold its annual meeting in conjunction with the Alumni Breakfast on Saturday, June 15 during Cornell's Reunion Week activities.

On the agenda will be a report of Association activities for 1973, adoption of a revised constitution, recognition of retiring faculty from the College and a report by Dean W. K. Kennedy.

The revised constitution proposes a Board of Directors of 12-15 alumni, plus the Secretary and Treasurer and two students, in place of the current arrangement of President, three Vice Presidents, three Executive Committee members, Secretary and Treasurer. The Board of Directors will then elect the officers. It is felt that a larger group will allow for increased representation and involvement of alumni.

Following the program, alumni are invited to tour Bradfield and Emerson Halls – the new agronomy, plant breeding complex. A newly developed “self-guided” tour has been created through the auspices of the College Fund Office with a marked diagram on the 11th floor to help identify buildings around the campus that can be seen from each end of the building.
Mr. Joseph B. King '39, Chairman
New York State College of Agriculture
and Life Sciences Fund
Roberts Hall
Ithaca, New York 14850

Dear Mr. King:

I have been notified by the Scholarship Committee of
the College of Agriculture and Life Sciences that I am a
recipient of a scholarship for the upcoming school year.
In view of rising college costs and my present financial
status, the award is certainly appreciated. I had not
anticipated any financial aid, so it is encouraging to
know that there is someone concerned and aware of the
financial problems inherent in furthering one's education.

I will do my best to assure you and the Scholarship
Committee that a wise investment has been made. Thank
you for your kind consideration.

Sincerely,

Susan A. Thomas

Note: Susan is one of nearly 100 students who received
scholarship aid from the College of Agriculture and
Life Sciences Fund this past year. This aid is made
possible by your contributions to the Fund.

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Soil Judging: A Team Effort
by GARY BENZION '74

The team huddled around the coach as the last few words of encouragement were given. They were ready for the coming contest. Every mind was alert. Every muscle was taut. The referee gave the signal to begin and they were off into the pit, each person headed for a clump of soil, almost the way a linebacker lunges to make a tackle. So began this agricultural event. The soil judging contest was underway.

While soil judging may not be classed as an athletic pursuit, the coaching, the practice sessions, and the intensity of the team members approach those of a bona fide sport. Soil judging begins in the fall at Cornell, as it does at many ag colleges and universities around the country. Signs go up announcing the first meeting of the soil judging team. Since 1961, Cornell’s College of Agriculture and Life Sciences team has actively participated in both regional and national soil judging contests.

Cornell has gone to national contests six times, earning an impressive record. It can boast of having the 1971 Northeast champion, Jakie Mangum. She competed against eighty other persons, four of whom were girls. Cornell also introduced the first female into the previously all male sport about five years ago. Today 25 percent of the soil judges in the country are women and Cornell’s soil judging team can claim 50 per cent.

The soil judging team has traveled to many parts of the country to compete. These include areas as far away as New Mexico and Wisconsin as well as nearby Maine and Pennsylvania.

Soil judging, like many sports, has a rigid time limit. In 25 minutes an individual must analyze a given soil pit for 75 characteristics. These include parent material, slope, erosion, horizon profile, and surface runoff. The contest pits are located outdoors and are approximately fifteen feet long and six feet wide. Several pits, usually three or four, are analyzed during a contest.

Each team is made up of four individuals, with the top three scores making up a team score. These individuals meet for six or seven weeks, once a week at night and every Sunday afternoon to discuss and examine soils for the upcoming regional contest. This contest determines the teams that will participate in the nationals.

In the fall of 1973 Cornell was the host for the Northeast Regional contest, inviting seven universities and colleges to the competition. The top two teams from this competition and those in the six other regions went to the national competition this spring.

Recruiting begins in the early fall, with a challenge issued to students in the form of a poster, “Don’t you be ignorant of Man’s greatest natural resource....”

The 1973-74 team consisted of ten students, which allowed Cornell to enter two teams, each with four students. The remaining two students were entered as individual participants. There is no restriction on the number of teams or individual participants that a school can enter. Further, if Cornell had placed in the top two in the regional contest, all ten members of the team would have gone to the national contest.

Not everyone gets on the team, according to Mary Collins ’75, a contest veteran. “A lot of people show up at the beginning, thinking it’s going to be easy, and after the ones who can’t handle it leave, we get to be a pretty tight group,” she notes.

Mary, like most judges, is an agronomy major. The team, however, is open to anyone in the university without any requirements except their time. An added incentive that facilitates recruitment is the one credit agriculture elective available to members of the team.

Dr. G.W. Olsen, the advisor/coach to the Cornell team says that the most important things a student gets out of soil judging are the experience and travel, meeting new people, and seeing different viewpoints all over the country.

Mary described the night before the 1973 meet as tense. Graduate students Jerry Kling and Leroy Daugherty, who serve as assistant coaches, spent long hours going over the fine points and rules of the competition. Mary comments: “When we lost the competition we were pretty low, like losing a basketball game. But Jerry was the first to pep us up and that helped our spirits.”

Next time with more veterans on the team Cornell will have a much better chance of going to the nationals. So if you are walking through the woods and happen to come upon people jumping furiously around in a hole in the ground, you’ll know that it’s Cornell’s soil judging team hard at work, training for the coming competition.
He's The Man Out Front
by SANDRA SILLS '75

You probably may not have noticed it last fall, especially if your seat was high in Schoellkopf's crescent. But out there leading the Big Red Marching Band across the playing field in a variety of intricate maneuvers and formations was Desmond Jordan, a junior in the College of Agriculture and Life Sciences and Cornell's first black drum major.

Up close, Desmond is a most ambitious, dedicated young man with a lot of good ideas that seek expression through his studies and extra-curricular activities. When you talk to Desmond, as this writer did, you find him a quiet and reserved person at first. He is tall and slim, with eyes that seem to light up at the mention of music. He is usually seen on campus wearing a green parka as he rushes to class unnoticed, except for close friends. Yet on the field with his immaculate uniform as he leads the band, he's a master of his art.

In a telephone conversation with Professor Marice Stith, director of bands at Cornell, I asked him his personal opinion of Desmond. His reply was, "He is doing an excellent job. I am very thrilled with his work." Professor Stith is an encyclopedia of music for the band, and he possesses a great musical talent. This is evident in his more than eight years with the band. Also, he has the final say and approval on all decisions about the band.

Desmond's musical career began at the age of eight when he learned to play the piano. His parents encouraged him to play the piano as they had his sister. But because of a desire to expand his musical interest, he learned the basics of all other band instruments (tuba, drum, trombone, clarinet, and so on), finally choosing the French horn as his instrument. Not only does he possess the knowledge about many different musical instruments, but he also has a knowledge of music history and music writing. All through school he took music theory and studied the history and style of various composers.

Although this was a first for Cornell's band, it was not a first for him. His initial experience as a drum major began while in Dwight Morrow High School, in Englewood, New Jersey. He received honors from the New York All Borough Orchestra and the Bergen Youth Orchestra in New Jersey. Thus he came to Cornell with considerable experience, which he continues to integrate into his duties as drum major.

During his first year as an agricultural student, he was voted "Freshman of the Year" by the band. This was because of his help in the theme shows during the year and his musical ideas.

The requirements for drum major are rigorous and time-consuming, but Desmond seems to thrive on a heavy work schedule. You may think being a drum major is just leading a band, but in actuality there's much more to it than that. Although there is much help contributed by the band members, the main responsibility is in the hands of the drum major and director. A typical week before a performance may look something like the following:

Sunday  2-5 P.M. meeting; afterwards thinking of ideas for the show
Monday  2-5 P.M. charting people's position on the field for each marching position; pick up music and learn score (usually 6 pieces) that take 3 hours after class in the afternoon
Tuesday

Wednesday
— 2–5 hours after or between classes re-charting, changing, or cutting music and marching positions (field positions)

Thursday
— 4–8 P.M. check music again; indoor band rehearsal

Friday
— 2 hours between or after class alone in bandroom thinking about the whole show

Saturday
— Band rehearsal 10 P.M.–1 P.M.; 2–5 P.M. playing on football field

“The requirements for drum major are rigorous and time-consuming, but Jordan seems to thrive on a heavy work schedule. You may think being a drum major is just leading a band, but in actuality there’s much more to it than that.”

But how does a student in the College of Agriculture and Life Sciences find time to do all this? Desmond does it with time to spare. He is a good organizer of his time, allowing time for his band activities, academic studies, and recreation. Although he is a student in good standing and a drum major, he is fairly visible at campus events. For his drum major activities he receives one credit towards his graduation requirements.

During the fall of 1973, one of his goals was to work on possibly changing the style of the band’s music. He did not intend to change it completely, but to give it a mixture of pop, classical, hardrock, and soul. If you have heard the band recently, you will have noticed that Desmond has introduced a few contemporary tunes to the program. Some of the tunes are "Killing Me Softly" by Roberta Flack; "Mac Arthur's Park" by Noel Harris, and "Celebration" by Jack Wheaton, tunes that had never been played before at Cornell.

It took quite a bit of musical expertise to change these arrangements to fit a marching band. The band’s traditional changing of formations with music and a theme was altered to a more expressive musical experience to appeal to all people at Cornell.

Naturally not everyone appreciates one or the same style of music, so if you have a mixture of styles you should reach a larger audience. When I spoke to Professor Stith about this he stated, "Our traditional theme show will be changed. We will no longer be doing theme shows like Watergate that we performed this last football season."

As for the future, Desmond would like to see the band continue to play a mixture of pop, rock, classical, and soul music. In addition to this, he also has a publicity committee in the making to increase the awareness of band activities among the greater Cornell student body.

It is evident to him that because of a lack of advertising, students do not know of the band’s performances home and away.

A drum major used to be appointed by the band director, but now he is elected by the students. Desmond was chosen to serve two years. This is an indication of his relationship with band members and their feelings toward him. From my personal relationship with some members I have learned of Desmond’s excellent communication with the band. He is regarded as a person who believes in perfection.

So this fall when you take in the half-time shows at Schoellkopf, regardless of your distance or vantage point from the playing field, you should have a better idea about the drum major leading the Big Red Marching Band. He’s Desmond Jordan, the man out front.
Looking Backward: The War Years

by DOUGLAS BLOCK '75

The time was mid-afternoon and the date December 7, 1941, when a broadcast of the New York Philharmonic was interrupted by the news of the Japanese attack on Pearl Harbor. For startled listeners on the Cornell campus, the immediate reaction was that some student must be pulling a prank – one in unusually poor taste, at that. As announcements continued to pour in, however, and the seriousness of the situation became apparent, the faces of the students turned numb and their expressions blank. Not able, through our vantage point of some thirty-three years, to perceive that this would probably be the most significant date of their lives, the thought suddenly occurred to them that the war might hinder their transportation home for the Christmas holidays.

Cornell has survived as an institution through two bitter world wars and even its own domestic battles precipitated by the war in Vietnam. When we examine the systematically shifting reactions of the students and administrations to each of these war periods, we are able to reflect on both the enormous changes the University has undergone over the years, and the remarkably unaltered attitude Cornell has maintained toward itself and its role in the outside world.

Looking through various campus records and journals of the first few years of World War I, one is impressed by the curious lack of attention it received. The U.S. policy at the time was strictly neutral, and in keeping with this, Cornell President Jacob Schurman set up an injunction against lecturers speaking out on the war or taking sides in any way. The war was always there in the news, of course, but by and large Cornell dismissed it, and Cornell was a microcosm of America.

Most people today mistakenly credit the sinking of the “Lusitania” on May 7, 1915, with being the event which provoked the country into war-like fury. The fact is, the editors and letter writers of the “Cornell Daily Sun” the next day were much more interested in such topics as senior blazers, the conviction hour, the holding of the Arts Association in dry Prudence Risley, and student apathy with regard to crew.

This is not to say that some preliminary storm warnings did not take place. Student interest gradually increased in the Cornell Cadet Corps; enough to earn the University a rare “Distinguished College” citation from the War Department in 1914. That same year, Drill Hall (later renamed Barton Hall, in honor of Colonel Frank A. Barton '91, the wartime commandant) was built for training Cornell men to become soldiers at a cost of over $350,000. In its time it was the largest university drill hall in the country.

Thus when President Woodrow Wilson announced a state of war on April 6, 1917 (he had been reelected six months earlier to the slogan of “He kept us out of war!” and the tune of “I didn’t raise my boy to be a soldier”), Cornell accepted its new task and threw itself into the struggle enthusiastically. Leaves of absence were immediately voted to all men in the service, and degrees to graduating seniors. Over 2,000 undergraduates and younger teachers joined up before the school year was finished. With the campus resounding to the tread of marching feet, interest in the scholarly pursuits, even among the faculty, ground to a near halt.

In the summer of 1918, as Cornell was on the verge of crumbling as an institution, the War Department stepped in and offered to pay for each soldier-student’s tuition, room, and board, in return for use of the campus as a Student’s Army Training Corps. For the rest of the year Cornell was transformed into a military school, with most of its men in uniform. The official figures for December 1, 1918, show 1,696 in the S.A.T.C., and 848 civilian men and 800 civilian women in the Ithaca colleges.

With the imminent surrender of Germany, the Army schools were promptly dissolved, but it took a full year before normally returned. Almost 9,000 Cornellians were in uniform; all told, 5,376 in active service. Two hundred sixteen Cornell men died in service.

In his fascinating and detailed book, “A History of Cornell,” the late Morris Bishop ’14 writes of the effects of the war on the University:

The intangible effect was to plunge the University, and the country, in a bath of seriousness, doubt, questioning . . . With the war ended America’s innocence, and also ended the Cornellians’ sense of living in an enchanted palace, secure against “the outside world.” With the war came, tangibly, a new habit of discipline, and an acceptance of it. The casual freedoms of student life were steadily infringed, regulated, channeled.

The Military Department had become a fixed part of the University; it never again sank to its pre-war levels.

Unlike the previous world war, no one in December of 1941 was singing that “the home fires must be kept burning” or that they would “not come back till it was over over there.” They no longer held any illusions about the glory and adventure of combat; no bonfires were lit, and patriotic pep rallies went unattended. It was in Bishop’s words a “drab, dirty, businesslike war.”

On December 8th, as declarations of war were forming, the University’s National Defense Council met and announced, “This is no time for hasty decisions.” It pointed out that the emergency had not essentially changed, and urged students to stay in school while awaiting their summons into the service. In compliance, the young men of the early 40’s did not rush off in a
fervor to enlist like many of their fathers did. They accepted the fact that they had certain obligations to fulfill and that their lives were under control of a central authority; as such, when they were drafted, they went off and performed their duty, however unpleasant, and they did it calmly and assuredly. As Bishop notes, “Youth, lacking means of comparison, accepts a current abnormality as its normal, and refuses to worry because things are as they obviously are.”

“For the duration of the conflict,” wrote President Edmund E. Day soon afterward, “there can be little or no education as usual”; and immediately following Christmas vacation, the new war program was implemented. Vacations were omitted and courses accelerated. A physical fitness program, including mass calisthenics, was required of all males, and courses in war-oriented fields such as mathematics, medicine, chemistry, and engineering were stressed. Finally, one year to the week after Pearl Harbor, the Cornell campus became a training ground for the Army and Navy; the services selected and supported the students, Cornell was paid for providing instruction and housing.

The number of civilian undergraduate men on campus dwindled rapidly and, as a result, women students rushed to fill in the voids. Overall, 14,896 Navy and 3,578 Army personnel trained at Cornell between July, 1943 and March 1, 1946. Forty-five hundred civilian undergraduates left without completing their studies.

Two new trends in particular were to come as a result of the war. First, an enormous amount of war research was done on campus — Cornell was to remain much more research-oriented in the future. Second, Cornell was never again to return to its pre-war size. “We have a moral obligation,” reported President Day, “to provide educational opportunity for the maximum number of well-qualified applicants who can be handled without impairment of the quality of Cornell training.”

To try to explain the campus reaction to Vietnam and the events of the 60’s in terms of the last two world wars would be mostly futile. One could probably trace an expanding student awareness of global realities, due to a rapidly developing communications media, and a subsequent loss of innocence and faith in the American system and general disillusionment when it became obvious to them that it was not the answer to the world’s problems. But this increasing restlessness and frustration was only one ingredient in a large simmering brew that exploded in the spring of 1969 with violent student takeovers of Willard Straight Hall and Barton Hall.

The evolution of antiwar activism on the Cornell campus occurred throughout the early 1960’s, kept alive mainly through the efforts of a small but vocal group of leftists and socialist organizations. Gradually, as Vietnam continued to stay in the news year after year, as reports of bombed-out Asian villages and pictures of napalmed women and children remained ever-present in the daily papers and newscasts, and as the possibility became ever more real that Cornell students were in imminent danger of being drafted to fight and perhaps die in a vague and, as yet, undeclared war on the other side of the planet, the moderate Cornell student body shifted as if drawn by magnets into various political spectrums. The campus became hotly divided between a leftist camp which espoused activism (or at least supported the activism of others), and a less visible but surely present group which clung tenaciously to its old beliefs in American values and ideals, and who resented the efforts of others to tear them down. It was this type of atmosphere, then — where everyone was strongly involved in and effected by the political issues of the day that spawned the militant actions on campus in regard to all kinds of social injustice.

(Continued on page 13)
Last look. This is the way things were just before downtown Ithaca was closed to traffic and the mall contractor took over.

Start of something new. Construction begins on the Ithaca Mall as construction workers rip into the pavement in the middle of State Street.
Over the summer, beginning practically the moment the last Cornell student left town, the city's main thoroughfare was dismantled to make way for the new Ithaca Mall. And now with school again in session it will be possible for everyone to keep first-hand tabs on construction developments. For those who were not here when it all began, the photographs on these pages show some of the initial phases of downtown's undoing. Fortunately, conditions will not be like this forever. Despite State Street's present blemishes and disarray, it will one day rise from the rubble as a modern shopping environment. The new Mall may or may not alter Ithaca as a university town. But you can be fairly certain that downtown will never be quite the same.

Roll out the barriers. Workmen unload snow fences used to seal off State Street during construction of the new shopping area.

For the record. The last car to officially travel the 100 and 200 blocks of State Street signals the closing of downtown's main thoroughfare.

Below the level. When the break-up came State Street was shattered by the impact of heavy machinery tearing the pavement apart.
Part Of Campus Life...

The Secret Societies

by JAMES SCHOONMAKER '74

Some have called them one of the best experiences in
college life. Others have labeled them exclusive and
anti-academic. But whatever the truth, fraternities and
sororities have been with Cornell since its founding.

In 1868, the first seven fraternities were established.
They were, in order, Zeta Psi, Chi Phi (which withdrew
after a time and returned in 1888), Kappa Alpha (the
oldest national fraternity), Alpha Delta Phi, Phi Kappa
Psi (which lasted six years and then reappeared in 1885),
and Chi Phi (which followed the same pattern as PKP).
All of these were originally located in rented buildings
downtown, because that was where most of the students
lived at that time. The hillside was not yet popular. In
1869, Delta Upsilon — a “non-secret” society — was
formed. Other fraternities were rapidly established, in-
cluding, in 1872, Phi Delta Theta, the first of the
“Western” fraternities. (It withdrew after three years
and returned in 1885.) In the school year 1880-81 there
was a bitter rivalry between the students living on the
“hill” — the independents — and the students “down-
town” — the fraternities. That year two sets of class
officers were elected and there were two separate class-
day programs.

In 1881, the first sorority — Kappa Alpha Theta —
was established. Delta Gamma came in 1885, followed
by Alpha Phi in 1889.

The year 1885 marked a fraternity “revival,” when
several houses which had previously left Cornell re-
turned. By 1887, one-quarter of all Cornell men were
in 14 fraternities. But this style of living was $200-
500 more than lodging-houses. And this became one of
the chief criticisms of the fraternities — that they were
only for the rich. Chi Psi’s move, in 1896, into the
Fiske-McGraw mansion, one of the most lavish houses
in the area, helped support this belief. In fact, no other
fraternity houses ever equaled this mansion. But some
came close: Chi Phi in 1891, Alpha Delta Phi with its
separate temple in 1903, and Delta Phi in Llenroc,
Ezra Cornell’s old house, in 1911. In his 1907 report,
Cornell President Jacob Gould Schurman said: “Rich
parents send their sons to college as in summer they
send them to the seashore or the mountains.” This also
led to a sort of “caste” system at Cornell, with the
“best” fraternities on top and the others and indepen-
dents arranged below.

The first real chapter house was established in 1878
by Alpha Delta Phi. It was located halfway up the hill
on Buffalo Street at Schuyler Place (a former Ithaca
College dorm). Since many students were still living
downtown, this was very convenient. Later, Cornell
granted lots to fraternity houses on University property,
and the fraternities moved uphill. Psi Upsilon was the
first of these, building on the borders of the Cascadilla
 ravine. By 1905, 10 houses were located on University
grounds, with one-quarter of the students in fraternities
or sororities.

The sororities also established their own houses. In
1915-16, Kappa Alpha Theta and Delta Gamma rented

A view of Chi Psi house (Fiske-McGraw mansion) from
Morse Hall shortly before the structure was destroyed by fire
on December 7, 1906. Alpha Delta Phi is in the left background.
houses. Then, in 1919, DC bought the old William H. Sage house on Seneca Street. The 10 other sororities at that time continued in rented houses.

Another of the criticisms lodged against fraternities of this era was that they were anti-coed. Apparently, a good number of fraternity men did not want women on campus at all. Verbal abuse of Cornell women walking past a fraternity house occurred. As an example, in 1920, women students were permitted to march in the parade before the Dartmouth football game. They were located at the front of the procession, and somehow a rumor got started that the women were demanding that they be allowed to compete for athletic managers. Some fraternities said they would boycott the Cornellian unless women were excluded. Although the controversy died by the following spring, it serves as an indicator of the thinking of some fraternity men at that time, although the number of these compared to the entire Cornell male population was small.

Anti-academic was another charge leveled against the fraternities during this time. In President Schurman's reports of 1918 and 1919, he said: "The fraternity must be baptized with the spirit of the University... The University demands hard study, so must the fraternity. And until the fraternity recognizes this fact its relation to the University will be ill adjusted... How to make the fraternities centers of intellectual life and activity? That is the great problem." He considered a plan developed in England whereby tutors would be assigned to the fraternities to begin a tutorial system. (It is interesting to note that today the Interfraternity Council has its own very successful IFC Tutorial Program, which aids both fraternity and non-fraternity students throughout the University.)

Fraternities were also criticized for maintaining files of notes, lab experiments, and exams, because this supposedly caused fraternity men to work less.

By 1924, there were about 70 fraternities (one-half of which were established in the preceding 15 years) with one-third of the 5000 male students. Twelve sororities took care of 300 women.

Because the University has never had enough housing for all its students, this has led to greater interest in fraternities and sororities as a place to live. This was as true in 1924 as it is today, 50 years later. Romeyn Berry, in his examination of local cultural anthropology, said he felt that "more than half of our fraternities were born of student boardinghouses, without knowing it." But, of course, once a fraternity was established, its social structure became more rigid.

Costs of fraternities varied. In 1924 it was estimated that room, board, dues, and other assessments for general expenses averaged between 480 and 850 dollars per year, plus the initiation fee. With all the extras, fraternity life could have cost around $1000/year. An independent student may have just gotten by on about $400 or he may have spent up to $700/year. Women students paid $480/year for room, board, and laundry.

Pledging was, like today, very important. In 1924, it was estimated that one-third to nine-tenths of all freshman pledges were recommended by the alumni of each house, although they may also have become known because of their accomplishments in athletics or music. (Today, most freshmen are met during Rush.) Like today, Rush was not hurried—freshmen had a chance to visit various houses before deciding.

During World War II, fraternity membership declined markedly because many young men went into the service, or were involved in war-related jobs at home. Fraternity houses were used to lodge Army and Navy men.

In 1945, the Kappa Alpha Professorship, endowed by the fraternity, was established. This type of professorship is quite unique. The late Morris Bishop, ’14, Professor of Romance Literature (and Cornell Historian), held the chair first.

In 1960, with 53 fraternities on campus, a survey showed that 60 percent of the male undergraduates (including freshmen) were fraternity men. Most were from the Colleges of Arts and Sciences and Engineering, with the College of Agriculture (and Life Sciences) being underrepresented. This was thought to be due to the number of two-year transfer students in the College. The survey also showed, however, that men from this College were among the least active in all kinds of extracurricular activities. There was also an over-representation of fraternity men from outside New York State, which could not be explained.

Today, there are 47 fraternities and seven sororities at Cornell. And if this year's Rush is any indication, they will continue to be around for a long time.

This is the house built by Ezra Cornell, which was incomplete at the time of his death. It was occupied by members of the Cornell family for many years. In later years it was purchased by Delta Phi fraternity and the house's name changed to Llenroc.
When The College Rode The Rails

by STEVE JACOBS ’74

Their names evoke memories of times past. The Wabash Cannonball, The Black Diamond, The Twentieth Century Limited. These were the great trains, representatives of another era when the train was the king of the road. They brought Indiana grain to Chicago markets, Massachusetts shoes to New York shops, California produce to Seattle stores. Banished to forgotten railroad yards, the only running these trains do nowadays is in the nostalgic lines of verse and song.

Buried in the lore of yesterday’s railroads are the stories of Cornell’s trains — the descriptions of the farm and home specials Cornell ran with the help of the New York Central and the Erie railroads. Instead of grain, these trains carried extension agents and home economists taking knowledge from Ithaca to every part of the state. Tips on remodeling, the latest in storage techniques, up to the minute farm information — all were ferried over the tracks from Ithaca to the people of New York State.

Searching thru the University archives, one finds Professor M. F. Barrus’ description of the first train in 1912. The Cornell Agricultural Special, as this train was called, ran 10 days, April 2 to 12, from Binghamton to West Chazy in the northern part of the state, and included a side trip to Peru. The train consisted of a locomotive, a baggage car which also accommodated a demonstration cow, Pullman sleeper, dining car, lecture car, and four demonstration cars. One of the latter was used for exhibits and demonstrations by the home economics department, one by poultry, one by farm crops, and the other by pomology, entomology and plant pathology.

From 1912 till 1927, the farm trains were a regular part of Cornell’s annual farm and home week, a seven-day cram course in everything new for farmers. The train made it possible for rural farmers, unable to come for the Ithaca programs, to keep up with advances in agriculture. But by 1927, travel was simpler and cheaper and the train was dropped.

Almost a quarter century later in 1946, wartime shortages revived the Farm and Home Special. The war had made it almost impossible to get a car, or enough gas to make the trip to Ithaca, so the extension specialists in the Colleges of Agriculture and Home Economics (Human Ecology), backed up by professors in the School of Nutrition and the College of Engineering and the railroads’ expertise, decided to bring Ithaca to the people.

A bulletin published in 1946 recapped the train’s odyssey:

Cornell’s Farm and Home Special traveled 2000 miles during the first three weeks of April to carry the latest farm and home research to more than 65,000 residents. The eight-car train made 41 stops in 37 counties.

Everywhere the train went, crowds jammed the exhibition cars. They saw plans for remodeled farm houses, diagrams of a home-built freezer, received suggestions on how to cut farm labor by using a buck rake and long hay blower, and were counseled to use “good ladino clover pastures for growing pullets” because it would mean “a lower-cost ration after chicks are 8-weeks-old.”

Some of the advice was timeless: “The remodeled farm house was developed in cooperation with a family of five. It showed how the existing structure could be altered to provide the additional areas needed by the family — a general workroom and laundry, a place to hang work clothes and muddy boots, a coat closet near the front entrance, a playroom for small children, a farm office, and a dining center outside the kitchen.”

However we look back at the series of specials today, there’s no doubt that they were loved by the people of the time. E. J. Leenhouts, New York Central’s liaison with Cornell for the ’46 run, wrote:

The Farm and Home Special, on our estimation, has proved to be one of the most successful projects which we have ever undertaken. The attendance of farm people was almost twice that we had anticipated; . . . the reactions of our co-operators and other agricultural workers was complimentary beyond measure.

It wasn’t only the railroad officials and the farmers who enjoyed the runs of the specials; archived letters from Cornell professors and administrators tell how they enjoyed the event. One of the ’46 trains’ organizers, G. Butts, says, “Yes, we had a lot of fun.” And from Professor Barrus’ description of the 1912 train:

Professor Wing, in lecturing on the subject of the boarder cow, had said that farmers would be better off to shoot such cows than to keep them. The next morning at breakfast, on our way to Bainbridge, he was joshed a bit by some of us who had heard shots during the night and contended that the farmers had been shooting their boarder cows.

The Farm and Home Specials would have no chance competing against today’s video-tape equipped extension agents. The towns like Silver Creek, Salamanca, Callicoon, and Lowville are easily reached by radio and television; no train is necessary to bring knowledge to their residents. But the specials must have been grand trains to see.
WAR YEARS continued from page 7

The University was used as a forum for lecturers and politicians to express pro and anti-war views. "Sun" columnists spoke out vehemently against the draft and often stated pro-SDS leanings. Protests were made over Cornell complicity in the war (specifically Cornell Aeronautical Laboratory, Inc., which did government-sponsored research into such areas as penetration aids for tactical aircraft, and anti-ICBM technology for military use in Vietnam). Lively faculty debates resulted in the de-emphasis of ROTC on campus. And years of conflict over such issues as civil rights, draft-card burning, hippies, non-violence, sit-ins, peace marches, and militancy, culminated in April of 1969 in perhaps the single greatest crisis Cornell has ever faced.

On April 19, Willard Straight was taken over by angry, gun-carrying blacks protesting reprimands given to three fellow blacks involved in incidents of harassment during agitation for a stronger Afro-American studies program. While their guns were not loaded, the pictures of blacks toting weaponry around a college campus created a nationwide stir. Meanwhile, several thousand SDS members and sympathizers congregated in Barton Hall to plan out some show of support for the blacks. They decided the best way was to remain in Barton Hall and boycott classes until concessions by the administration were made. After an overnight sleep-in on the floor of the former drill hall, word spread like wildfire and by mid-afternoon of the 22nd, the crowd of protestors had swelled to over 9,000 people. A harried faculty, which had earlier voted down the concessions, was all but forced to reverse itself by the rebellious throng. Chaos and violence, which had threatened to break out at any time, were narrowly averted.

During the five years since the events topped off by the strikes and takeovers, we've witnessed a steady decline in student interest in politics and social activism. Once again the campus has turned inward, with attention focused on "the eternal verities" and individual achievement and graduate school.

When a "Sun" editor wrote of the effects of Vietnam in June of 1969 that, "Above all, we have seen the last of the American University as a separated idyllic community," it was not unlike the sentiment expressed by Bishop about a war fifty years earlier, a war that had already supposedly "ended the Cornellians' sense of living in an enchanted palace, secure against the outside world."

Wars cannot help but have a drastic effect upon the universities, and Cornell through the years has been no exception. When periodically they have come, they have served to intensify the relationship of the campus and the outside world. But after bitter years of fighting have ended, the University, though greatly different for the experience, has inevitably returned slowly to normalcy and the comfortable green sanctuary of academia.

‘Russ’ Mott . . .
Tropical Plant Keeper Retires From Cornell

The man who has looked after Cornell University’s worldwide collection of tropical plants used in teaching and research recently retired after 35 years of service.

Known to the Cornell community and industry as "Russ," Russell C. Mott has been responsible for care and maintenance of the tropical plants in the Conservatory at the College of Agriculture and Life Sciences.

Since 1968, the Conservatory has been a part of the Liberty Hyde Bailey Hortorium at the College. Previously, it was operated by the Department of Floriculture and Ornamental Horticulture.

Aside from his speciality in the culture and propagation of exotic plants from tropical areas around the globe, Mott is an expert in the use of tropical plant materials in interior landscaping.

Recognizing his outstanding achievements in the practice of horticulture, the Federated Garden Clubs of New York State awarded him the 1972 Alice Doscher Horticultural Bronze Medal.

More recently, he served as a consultant on "Foliage House Plants," a volume published as part of the "Encyclopedia of Gardening" series by Time-Life Books.

Among other accomplishments, Mott developed two artificial soil mixes, "Cornell Foliage Plant Mix" and "Cornell Epiphytic Mix," for growing tropical foliage plants.

A native of Huntington, N.Y., Mott came to Cornell in 1935. After taking a short course in floriculture, he joined the staff of the Department of Floriculture and Ornamental Horticulture as a gardener. Two years later he took charge of the Conservatory.

During World War II, he worked at Morse Chain Co. in Ithaca for three years. After serving as general manager of a commercial orchid firm in Philadelphia for a year, he returned to Cornell as an experimentalist, resuming his previous job of overseeing the Conservatory.

Through the years, Mott assisted with many research projects, especially those dealing with roses, orchids, gesnerias, aroids, and palms. He also has assisted in the teaching program and participated in numerous Cooperative Extension meetings as a speaker.
Several hundred entomologists gathered in Ithaca this month to celebrate the centennial of the Department of Entomology at Cornell University, the first university department in the nation devoted to the study of insects.

The conference honored the founder of the entomology department at Cornell, John Henry Comstock, who was initially attracted to the young university in 1870 because of its "non-traditional" reputation.

Comstock, who worked his way through his undergraduate years at the N.Y. State College of Agriculture and Life Sciences, Cornell, by husking corn at 3 cents a bushel, taught more than 5,000 students during his 40 years at the University.

In an attempt to survey the historical, social and scientific aspects of Comstock’s impact, the symposium has been titled, “Insects, Science and Society.”

After a brief look at “The Comstock Heritage” by Howard E. Evans, professor of entomology at Colorado State University and a former Alexander Agassiz Professor at Harvard, the centennial celebration devoted itself to new vistas of entomology and its implication for the well-being of man.

Other eminent scientists invited to speak included John J. McKelvey Jr., associate director of the Rockefeller Foundation and author of "Man Against Tsetse," who spoke on insects and human welfare; Prof. Edward O. Wilson, of Harvard, who discussed the behavioral characteristics, such as aggression, that guide both human and insect behavior; and John S. Kennedy, F.R.S., professor at the University of London, an authority on insect dispersal.

Also on the program were Prof. Richard D. Alexander, of the University of Michigan, who reviewed the acoustical aspects of insect communication and Prof. Wendell L. Roelofs, a Cornell authority on the practical control of noxious pests through the use of traps baited with synthetic sex attractants.

Other speakers included Mano D. Pathak, assistant director of the International Rice Research Institute in the Philippines and one of the original developers of the "miracle rice," who spoke on the interactions between plants and insects; Thomas R.E. Southwood, head of the Department of Zoology at the University of London, who discussed his particular area of interest, the dynamics of insect population; and Prof. Richard L. Doutt, of the University of California at Berkeley, who described parasitoids, predators, and population dynamics.

As part of the program Prof. Richard A. Baer, an authority on environmental values and a past chairman of the Department of Religion at Earlham College in Indiana, will join the College faculty as an associate professor.

Ethics of Decisions Basis For New Course

A grant of $99,188 from the Lilly Endowment, Inc., to Cornell University will enable students at the N.Y. State College of Agriculture and Life Sciences at Cornell to explore the ethics of decisions involving man’s relationship to his natural environment.

The new program funded by this grant, entitled “Values and Valuing in Education for Professional Careers in Agriculture and Life Sciences” will be conducted for a three-year period in the College’s Department of Natural Resources, according to Dean W. Keith Kennedy.

He noted that in the past, students have had limited opportunities to discuss ethical and philosophical questions relating to their future professions. The “Values Program” will assist students in thinking through the meaning of professional responsibility in their planned areas of work.

The program is considered to be particularly valuable for those considering careers in agriculture and the life sciences because, although new technology is demanded, many social problems are not susceptible to simple technological solutions. Acceptable solutions to social problems must consider people's values and ideals.

Oyer Named Director of Agriculture Program

Edwin B. Oyer, an international expert in vegetable crops and world agriculture and a Cornell faculty member, has been appointed director of the Program in International Agriculture at Cornell University.

He succeeds Kenneth L. Turk, who has recently retired from Cornell after 38 years, the past 11 as director of the Program in International Agriculture at the N.Y. State College of Agriculture and Life Sciences.

The Program in International Agriculture was established in 1963 as a major administrative unit of the College to coordinate and direct the College’s many and diverse international agricultural activities.

Well known to the Cornell community, Oyer has been a faculty member of the College for 17 years, including five years as chairman of the College’s Department of Vegetable Crops.
James H. Schoonmaker '74, won a 1974 internship from the International Radio and Television Foundation in New York. A June graduate, he majored in communication arts in the College of Agriculture and Life Sciences. Schoonmaker is among six in the nation so honored this year, and the first Cornellian to win the award since the College internship Program was initiated five years ago by the Foundation. Under the program, Schoonmaker spent eight weeks, starting July 8, in New York learning all phases of television and radio broadcasting involving network and local station operations. He was involved in programming, sales, promotion, public relations, public service, engineering, legal aspects of broadcasting and the definition of broadcast audiences, among other assignments. During his College years at Cornell, Schoonmaker was closely associated with the radio station WVBR-FM in Ithaca, where he served in the news department for three years. He was vice-president in charge of facilities for the station during 1973-74.

Douglas R. Pickett '58, has assumed the position of County Director, India, Peace Corps, located in New Delhi. Prior to this he served as an Extension Representative in the College of Agriculture and Life Sciences. Doug was reared in India, and he indicates that his new assignment takes him to familiar territory and provides an opportunity to renew acquaintances with old friends.

David T. Smith '53, was recently named program coordinator for Cooperative Extension in the College of Agriculture and Life Sciences. Prior to this he was director of the Cooperative Extension Association in Monroe County, N.Y. In his new assignment he assumes major responsibility for coordination of extension program in floriculture, ornamental horticulture, fruit, and vegetable crops. He has had extensive experience both in extension work and agricultural business. He began his extension career in Madison County in 1955, where he served as agricultural agent for a year. From 1956 to 1962, he was an agent in Otsego County. He then spent the next eight years with Agway, Inc., first as technical fieldman and later as sales manager. In 1970, he returned to Cooperative Extension as Monroe County extension associate director.

Egner Appointed To Ag Research Post

Joan Roos Egner, associate professor of education, has been named acting associate director of research at the College of Agriculture and Life Sciences, and acting associate director of the Cornell Agricultural Experiment Station.

She assumed her new position on July 1, replacing Prof. Joseph F. Metz Jr., the associate director, who is on leave. She will handle social science programs in the areas of funding, project review and processing.

State Dairy Princess To Be Ag Engineer

Pursuing Ezra Cornell's promise to provide an institution "where any person can find instruction in any study," Miss Melody Hector enrolled this fall as the first woman in the professional agricultural engineering program at Cornell University.

Miss Hector of Swan Lake served as the State's Dairy Princess, 1973-74.

Leonard W. Feddema, director of admissions for the College of Agriculture and Life Sciences said that her choice of major was, "quite natural since she is a whiz at math and has constantly worked around machines at her Sullivan County farm home."

The professional agricultural engineering program, jointly administered by the College of Agriculture and Life Sciences and Cornell's College of Engineering, requires a sincere interest in a rigorous engineering curriculum. It offers the student opportunity to combine interests in biological and agricultural sciences with engineering sciences.

Feddema noted that graduates of this program often find jobs as consulting, sales, service, and test engineers, as design and structural engineers, technical writers, researchers, or teachers.

Open House November 9

On Saturday November 9, the College of Agriculture and Life Sciences and the College Alumni Association will co-sponsor an Open House for high school students interested in attending Cornell.

The program will begin at 9:00 a.m. and will feature tours of college facilities, information about admissions to the college, academic programs and career opportunities; and a student panel concerning student life on campus.

Alumni assistance is needed in locating good prospective students and in transporting them to campus. For further information contact Clifford F. Luders, Alumni Association President, Schultz Road, Elma, New York 14059, (716-625-2801) or Richard A. Church, Assistant Director of Admissions, 195 Roberts Hall, Ithaca, New York 14853, (607-256-2036).

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NEW YORK STATE
College of Agriculture and Life Sciences

Mission: "To increase man's understanding of agricultural production, marketing, life sciences and the environment; to educate citizens for careers and leadership in these areas; and to translate new knowledge into action for the benefit of mankind."

Few problems have a higher priority than providing an adequate supply of the proper food at reasonable prices to the people of the world while at the same time conserving and improving natural and human resources. Students in the College of Agriculture and Life Sciences have an opportunity to select from a variety of programs that will prepare them to contribute either directly or indirectly to the solution of these important problems.

The College of Agriculture and Life Sciences is a part of two great university systems - the State University of New York and Cornell University. As a statutory college of the State University of New York, it is tax supported, and, as such, has a special mission to serve the people of New York State. Graduates receive their degrees from Cornell as do those of the other fourteen colleges and schools of the University.

With approximately 2,800 undergraduates and 900 graduate students, the College offers the friendly environment found at most small colleges. At the same time, students in the College are members of the larger Cornell community and are able to participate in the numerous activities that can be offered only by a large university. Students in the College may take courses in any of the undergraduate schools and colleges at Cornell. This opens up a virtually unlimited selection of courses from which to choose, contributing breadth and perspective to strong, specialized programs of study. Students in the College usually take about 50 percent of their courses in other divisions of the University. One of the unique and highly beneficial aspects of the instructional program is that most faculty members also have responsibilities in research or extension. Students benefit because professors are able to add a current and relevant dimension to their teaching.
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Studying Environmental Values
by KERMIT PATTON '75

Play, festivity, silence, beauty, wonder, and praise are probably not among the concepts generally regarded as normal fare for a college course. This term however, 22 students under the direction of Prof. Richard Baer will be studying the importance of these concepts in understanding and dealing with the natural environment.

The formal title of the course, “Ecology and Play, The Role of Non-Utilitarian Values in Our Relationship to Our Natural Environment,” defines the goal and intent of the course but the means to that end are flexible and, to a great extent, determined by the individual students. Professor Baer has compiled a list of readings which will serve as a base for class discussions as well as a starting point for further research by the students on an individual basis. Each student is required to submit a project of his own design at the end of the term. The format and structure of the individual projects will be determined according to the student’s desires and abilities. Students enrolled in the class are from a variety of backgrounds and represent several of the various colleges here at Cornell. The projects will vary anywhere from the traditional term paper to audio-visual presentations, or even poetry or short stories.

The course also features a weekend conference-retreat at the Shackleton Biological Station on Oneida Lake. The retreat will provide the time and means for experimenting with the concepts and values discussed throughout the term as well as providing an opportunity for students to further understand and appreciate the activities of the entire semester. The ultimate goal will be for the student to develop and articulate his own environmental ethic.

“Ecology and Play” is only the first in a series of courses sponsored by the Department of Natural Resources under a grant from the Lilly Endowment, Inc. The three-year grant will fund courses dealing with the role of values in professional education and more specifically, in careers in environment.

Professor Baer, who will conduct the courses, joined the faculty at Cornell this past summer. He is an authority on environmental values and a past chairman of the Department of Religion at Earlham College in Indiana. He has studied extensively in the field of environmental values and ethics and has authored a variety of articles in the field since 1966.

Professor Baer believes that man’s consideration of the environment has been too narrow and limited in the decision making process. Decisions should not be made solely on technical grounds; a more complete understanding of man and his relation to his environment must be included in the decision making process. The courses in the Seminar in Environmental Values will both examine this decision making process as it occurred in the past, and attempt to realize a more complete understanding of man as a part of his environment.

The Seminar’s courses are innovative in several aspects such as course readings, student projects, and the conference-retreat (tentative topics for future courses include one for the study of new models for higher education in the age of ecology). A very important element of the Seminar however, is its basic intent; to broaden the base of the decision making process which deals with the application of technical and scientific knowledge.

The Seminar in Environmental Values may well represent a coming trend in higher education. The study of values and ethics need not be limited to environmental studies. An understanding of ethics is becoming increasingly important for fields such as politics and biological sciences to name just two. Whether or not this trend continues in the form of the Seminar in Environmental Values will be decided by the administration of the College of Agriculture and Life Sciences in 1976 when the College must decide whether to continue the program after the grant has ended.
According to the 1970 United States Census, fifteen out of every twenty people live in urban areas. In a thirty year period thirty million people left rural areas to seek the better life urban areas seemed to offer. Now seventy percent of the American population lives on only two percent of the land. The crime rates and slums of urban centers scarcely make them examples of the American dream, yet the countryside continues to empty while the cities continue to grow. The situation becomes increasingly worse as the country-to-city trend goes on.

"America is passing through a social, economic, demographic, and technological evolution that is 'unhitching' the rural development process from the modern agricultural development process," J. Paul Leagans, professor and coordinator, Graduate Program of Extension and Continuing Education at Cornell, suggests rural development as one approach to solving this problem. In a paper titled, "Rural Development: an Emerging Social, Economic, and Demographic Imperative," Professor Leagans asserts that it is time for rural America to "be viewed as a new societal segment because its social, economic, physical, and political anatomy is now so different from the past." He maintains that the United States, in developing its agricultural prowess, should no longer continue to assume new ideas in agriculture will automatically lead to meeting the needs for rural development. Agricultural development and rural development should be treated as two separate yet interrelated entities. "Rural development implies improvements in the way people work and live;" explains Leagans, "agricultural development implies constant expansion in production of food and fiber at optimum levels of quality, quantity, and economic returns. Rural development focuses on improvements in the quality of life; agricultural development focuses on the quality of commodity production to sustain life, so, strategies for promoting either have implications for both."

Leagans points out that until the Rural Development Act of 1972 was passed, the United States treated the subject of rural development with a laissez faire attitude. "The controlling assumption has been that such singularly American values as entrepreneurship, the free-enterprise system, local self-initiative, and self-generation of required growth resources would meet the rural modernization needs." Time has proven this assumption contrary to the needs of rural America. For years rural America's most valuable human resources have been leaving the countryside to seek the greater rewards they hoped to find in urban areas. The United States Department of Agriculture (USDA) observes, "Hundreds of small towns have become hollow shells haunted by boarded-up stores and large, half-empty homes occupied largely by elderly citizens because the younger generations have fled to the cities." The quality of urban life today should be enough to tell us that this is a trend which must be reversed. Rural development is needed to slow down urbanization and to attract people living in crowded, dirty cities back to the country.

With its laissez faire approach, the United States has been unsuccessful in dealing with rural development. Leagans states, "leaving people to their own initiative and resources is not enough; planned intervention from land-grant universities and other external sources, such as local, state, and central governments, is essential to achieving intelligent patterns for developmental growth." In an interview Leagans observed that "Rural development may best be viewed as a series of unit programs in a broad framework." He said that while programs are being carried on in areas such as housing, small business, and health, they are being carried out in a rather isolated, "haphazard" way. What is needed is a "problem oriented approach" which will "focus resources on the needs that are local be that local a state, county, or community."
Leagans intentionally avoids proposing a specific, overall program for rural development because the needs of one community or area will differ from those in another. He suggests that the following criteria be analyzed when considering the developmental needs of a particular area: (1) the kind, amount, and quality of human economic and physical resources available; (2) how these resources are organized; (3) how the rewards are distributed in relation to the quality of life; (4) how the structure is changing; (5) what improvements are needed; (6) the most promising intervention strategies.

A single "recipe" for rural development is unlikely to work because it won't fit the specific needs of each individual community.

With these needs in mind, the Rural Development Act of 1972 was drawn up by the U.S. Congress to facilitate rural development through various institutions including increased research and extension work by land-grant universities. Land-grant universities such as Cornell must continue in their research, teaching, and communication efforts. Leagans notes however, that the dissemination of new information should not be restricted to the fields of agriculture and home economics as has been the tendency in the past.

Universities should seek out new ways to serve the public and to provide knowledge in new areas when needed by particular communities. "The role of matchmaker between university resources and people's problems," observes Leagans, "is complex and may require some new approaches to curriculum, staffing, teaching, research, organization, and administration. In the future, more educational and related resources may well be channeled into the development of the rich and largely untapped human resources in rural America."

Raising the quality of life in rural America is a massive project. Country life must offer better job opportunities, housing, education, communication, and health facilities if it is to keep its present population and draw people away from city life. It is an immensely complex task to undertake but if successful, it could end in the utopian lifestyle labelled by the USDA as the "Community of Tomorrow."

"Imagine, if you will, a time in the future when the American landscape is dotted with communities that include a blend of renewed small cities, new towns, and growing rural villages. Each is a cluster with its own jobs and industries, its own college or university, its own medical center, its own cultural, entertainment, and recreational centers, and with an agriculture fully sharing in the national prosperity.

"Imagine hundreds of such communities that would make it possible for 300 million Americans to live in less congestion than 200 million live today — that would enable urban centers to become free of smog and blight, free of overcrowding, with ample parkland within easy reach of all.

"A dream world? Not exactly. It is a world we can build if we are willing to work for it."
The science distribution requirement in the College of Agriculture and Life Sciences has been criticized as much as it has been commended in recent years. Some students in the social science majors have complained of the requirement—twelve hours of physical sciences and twelve hours of biological sciences—contending that the science courses would be of no use to them in their future employment. Other students and faculty members maintain that a broad education is needed, especially in this age of science and technology.

According to Dr. Donald C. Burgett, the College of Agriculture and Life Sciences Registrar, the last change in the required courses in the sciences was made in 1969. Although it was liberalized, it did not change the total number of credit hours needed in the sciences.

"The whole idea of a distribution requirement is to help insure that graduates of the College do not leave with a narrow field of courses," he said. "That is the theory behind it.

"It would take faculty action to change it," he continued. "It would have to be brought up in one meeting and voted on at the next meeting. That way everyone would have time to consider all the ramifications of such a change."

A resolution to reduce the amount of required sciences in the college was introduced at a faculty meeting in the Fall 1973 semester. The resolution failed to pass, however, because there was a tie vote, which, in parliamentary procedure is a defeat.

Prof. Harold R. Capener, chairman of the Department of Rural Sociology, said a change was needed in the physical sciences category. He said the total number of hours, however, should remain the same.

"My own view about the current organization of the groups A, B and C is that they badly need to be reviewed and updated," he said. "I would simply eliminate the specific requirement of six hours of chemistry or physics, and provide free choice for the minimum of 12 hours to be taken in any of the physical science subjects, including the adding of mathematics and computer science to that list.

"This would make it possible for social science majors to obtain a necessary background in the physical sciences, but not be compelled in the specifics of chemistry or physics.

"I would not alter the group B category in Biological Sciences in any way," he said. "I think it is flexible and appropriate as it stands."

Prof. Charles C. Russell, former chairman of the Department of Communication Arts, said he thought Communication Arts majors could possibly benefit from a new requirement in political science, marketing or business law, but he felt strongly about retaining the science requirement in the college.

"There are students who come along with definite career goals in the public affairs reporting area," he said. "Those students could use less science and have a core of political science requirements which would strengthen their career goals."

Professor Russell said he thought a science requirement was needed for Communication Arts students for several reasons.

"It creates discipline in the students," he said. "Also, it's a scientific world out there. If they do want to become science writers or work for an industry, it's a plus. I don't think anybody has suffered."
The general distribution is good," said Prof. Helen L. Wardeberg, chairman of the Department of Education. "I would retain the three categories and probably the total number of hours in each, but I think we should at least consider very carefully the specific requirement of six credits of physics or chemistry in category A. I think in the present requirement, math and computer science are probably more important, or at least as important for the students, as knowledge of chemistry or physics.

"It's been some time since they (the distribution requirements) have been reviewed," she continued, "and it is time to see if there are other sources that should be included. Ideally, that should be done periodically. Over time courses change.

"Our guidelines are very good," she said in defense of the science requirement. "They allow for plenty of flexibility."

"There should be some sort of requirement," said Prof. Richard D. O'Brien, Director of the Division of Biological Sciences, "but I haven't thought about whether the ones for social science students should be the same as others.

"I appreciate the student concern for flexibility in course planning," he went on, "but there is a tendency for undergraduates to overspecialize. It would be wrong for us to remove the requirements which insist that the student take a broader curriculum. We must make sure that a student goes through with an education that has breadth."

There was a general agreement, however, that the students in the social sciences did not especially enjoy completing the science distribution requirement.

"I think the majority of students complain about the requirements," said Professor Russell. "For the most part, I would say they don't have a difficult time (with the science courses). The Communication Arts students see a need for quite a bit of science in their curriculum because they know they will have to live and interpret a scientific world when they leave Cornell."

"Some of them (students) try to meet the chemistry requirement through summer sessions here or at a community college," said Professor Wardeberg. "That is an indirect complaint. They seem to accept the fact that they have to do it.

"There is still plenty of option," she continued. "They have enough choice in the remaining courses. In the modern world it is good for everybody to know something about physical and biological sciences, even if their work is in the social sciences area.

"There is a high degree of anxiety and transfers," she said. "My experience is that the chemistry in particular is a hurdle to get through. Students often fail to see its relevance. Relevance is certainly not the only criteria, but because it is required, they see it as a barrier.

"There is no trouble with biology," she said. "Maybe biology is more related to people. I think the biological sciences are making efforts to provide different emphases with a variety of different courses. That may be part of the reason why biology is less of a problem."

"We would probably get more intra-college transfers from Arts if the science requirement were changed," said Professor Russell. "The drop-out rate is not that high in our department. The reason for the dropouts are rarely the science requirements."

"In general, I feel the students are less adverse to taking physical and biological science courses as such," said Professor Capener. "It is primarily the forced choice of taking chemistry or physics that they object to the most."

"Nobody should have a hard time taking it," said Dr. Burgett, "and I fail to see that taking it over eight semesters should be hard for anyone. The courses would not be as easy for social science students as the biology or chemistry majors. Some have gotten into difficulties, but because they have procrastinated and waited until the last year. There have been no instances that I know of that a student has failed to graduate because he couldn't meet the distribution requirement. Regardless of how you look at the requirements, there has been no one who could not graduate because of the requirement."

He did have advice for the students who have to take the sciences.

"Attack it early," he said. "Don't put it off. There are people to help students having difficulties. The admissions people do not let people in if they don't think they can handle the courses. If the requirement remains, it has got to be met."

He did have what might be some good news for struggling students.

"It's more than likely that it will come up before the faculty," he said of the proposal to liberalize the science requirements. "The Educational Policy Committee is working on another proposal to the faculty now. I'm sure you will see something going on this year, but what will happen I have no idea. I would assume that it would change instantly if passed."

"I wouldn't guess the outcome," he said. "They are voting on what the degree from this college represents."
A new tradition at Cornell is proving that the Cornell Plantations is a living, viable learning experience. This year was the fourth annual “Fall-In” at the Plantations, an event consisting of some 20 demonstrations, activities and exhibits, including pumpkin carving, a trail hike and the sampling of edible wild foods.

Described by Director Richard M. Lewis as a series of “outdoor laboratories— a place for education, research and enjoyment,” the 1,500 acres of the Plantations includes gorges, ponds, lakes, bogs and woodlands.

A crowd of 3,000 people participated in this year’s “Fall-In” event. Horse-drawn and tractor-drawn wagons carried the visitors along the Plantations Road. Hikers were treated to a guided walk through the Plantations, across the suspension footbridge over Fall Creek and along part of the Finger Lakes Trail. Architectural sculptures, talks on edible wild nuts, nature photography, and a demonstration of electric cars of the future were also presented. On hand to perform were the Ithaca High School Band and the East Hill Singers, all elementary school children.
Personalizing Courses . . .

Biology Center: Gaining New Insights
by SHELLEY E. PAGE '76

Humanizing the Cornell experience—what’s what the Division of Biological Sciences is all about today. Both faculty and students express deep concern over the mechanization of Cornell education. A need for closer student-faculty relations and a lack of communication in general has sparked many innovations. The Division of Biological Sciences leads the way in humanizing the education of Cornell undergraduates.

The new Biology Center serves as a focal point for much of the humanizing effort. The Center, which opened this fall, provides a “home” where biology undergraduates, graduate students and faculty can interact outside of classroom settings.

“These contacts, in connection with course work, will provide additional insights into the nature of biology in general, biology at Cornell, and ways in which student’s interests and goals might fit in,” comments Sylvia Miller, an administrative aide who works in the Center.

Prof. June Fessenden-Raden, the Associate Director for Academic Affairs in the Biology Division, as well as the Biology Center’s founder, noted that students today “unlike the generations which preceded them want to know and interact with the faculty but they do not know how. Most are too intimidated to just go to a professor, and they have never heard of inviting a professor to dinner. In fact, many were surprised when I told them this was once a very common occurrence. Many faculty unfortunately still picture students as they were in the late sixties when clearly many wanted nothing to do with the establishment (faculty). This is not true of our students today. It seems to me that the Biology Center can serve as the contact point for students and faculty. Then the students can take it from there.”

The Biology Center also serves as a personal and academic advising center for biology students. Upperclassmen are available to answer questions or to make referrals. Sylvia Miller says both biology and nonbiology students have made extensive use of this service. Information on courses, seminars, student opportunities, and career possibilities can be found at the Center as well.

Great student support reflects the need for the Center. After identifying student needs and setting up the Center, students are still actively involved in planning special biology programs, producing a newsletter, uncovering undergraduate opportunities in research and employment, working up course analyses, seeking information on career alternatives to medical and veterinary schools, and providing volunteer tutoring for core biology courses.

Professor Fessenden-Raden sees the Center’s role evolving as student’s needs change. “The Center must be able to change with student’s needs in order to be effective,” she said.

Presently the Center is located at G-3 in Stimson Hall. By January, the Center will be housed in the basement of Stimson with expanded facilities to accommodate the development of mini-courses in biological techniques and scientific writing. The future Center will also serve as an audio-tutorial support for biology courses by providing film loops, tapes and other audio-visual material for students.

Other changes more directly affect the formal education process. Smaller classes at the introductory level with a variety of learning techniques have replaced the large impersonal lecture approach. The most exciting innovation is the autotutorial program in which students learn from independent self-paced laboratory exercises. Selected readings, audio-visual material, exams, and personalized faculty assistance enhance the student’s lab experiences.

Four years ago, introductory biology was offered in
one course with 1250 students. Today, introductory biology covers four courses, each geared to different levels for non-majors, majors, and students with Advanced Placement background. With these changes, the Biology Division caters to student’s differing requirements and learning method preferences.

The Division of Biological Sciences also recognizes that there is more to biology than becoming a doctor, veterinarian, or researcher. A new major is under consideration called Biology and Society. It will provide an alternative look at biology. The interdepartmental curriculum would explore the societal implications of biological discoveries. Human problems such as the energy crisis, thermonuclear power plants, drugs, and cancer cures will be examined from both a biological and social scientific viewpoint.

At present, this new major is only in the talking stage among academic committees in the College of Arts and Sciences, the College of Agriculture and Life Sciences and the Science, Technology and Society Program. But the supporters of the Biology and Society movement expect the major to be a reality next fall. Professor Fessenden-Raden sees the Biology and Society major as a way to satisfy the needs of those students who are deeply interested in biology but also want to broaden their background with economics, communication arts, sociology, and other social sciences. Until now, these students have been neglected by the Division of Biological Sciences, which is heavily science oriented.

But aside from these recent innovations, the Division of Biological Sciences displays uniqueness in its own right. In 1964, many fragmented biology-oriented departments at Cornell joined forces to form the Division of Biological Sciences. For the first time, a division of Cornell University cut across statutory and endowed college administrations. Cornell is the only U.S. university where a student can pursue a biology major in either the College of Arts and Sciences or the College of Agriculture and Life Sciences. The Division offers identical biology programs to students of both colleges.

The size of the Biology Division also distinguishes it from other parts of the university and other biology departments across the country. Over 100 professors teach courses and conduct research under the auspices of the Division of Biological Sciences. Students can choose from among 125 courses covering topics from introductory biology to the specialized areas of genetics, biochemistry, animal physiology, and others.

The biology program offers a unique approach to a complex science education. All biology majors must take “core” courses in biology, chemistry, biochemistry, genetics, language, and physics to form a firm science foundation. Biology majors must then pursue study in two deeper “breadth” areas of biology. From this point, the student may concentrate in a chosen area of biological specialization. In this way, the curriculum permits a great amount of flexibility so that each student can tailor his or her individual program in biology. Independent study and research are encouraged as well.

Size can cause problems, too. The Division of Biological Sciences can accept only 200 students each year (Continued on page 14)

“The new Biology Center serves as a focal point for much of the humanizing effort. The Center, which opened this fall, provides a ‘home’ where biology undergraduates, graduate students, and faculty can interact outside of classroom settings.”
Entomology Part Of Cornell History
by JOAN MILBAUER '75

Cornell is known worldwide for its renowned academic programs. A considerable portion of this universal reputation is due to the qualified teaching, research, and extension program efforts in the College of Agriculture and Life Sciences. Contributions to knowledge come from a variety of sources and a look at the record shows that the College enjoys a long history of service to mankind.

An example of this rich tradition came into focus recently with the centennial celebration of the Department of Entomology. Founded in 1874, the Department was established by John Henry Comstock. Comstock entered Cornell University in 1869. He worked his way through his undergraduate years at Cornell, by husking corn at three cents a bushel, and working on the construction of McGraw Hall.

At first Comstock's friends pushed him towards the study of medicine. However, his enthusiasm of discovering things in nature led him to conclude that he could accomplish more good in the world as a naturalist than as a physician.

Students themselves sensed Comstock's knowledge and petitioned the Board of Trustees of Cornell University to allow Comstock, while still a student, to lecture on insects injurious to vegetation. Permission was granted, and Comstock, who was chimesmaster at the time, changed his McGraw living quarters into the University Entomological Museum. The museum consisted of two rooms on the second floor of the Tower. In 1875, he received the first microscope that Cornell owned, a gift from John S. Gould, an eminent lecturer in agriculture. By 1877, although only three students were required to take a course of lectures in entomology, fifty students were attracted to Prof. Comstock's lectures. As the Department of Entomology grew they moved to other buildings being built on campus.

This great man does not stand alone in his part of the history of Cornell. Anna Botsford Comstock, one of his former students became his wife. Whereas, Comstock was a nervous, meek type of person, Anna Comstock was a very strongwilled person. In 1898, she received the title of Assistant Professor of Nature Study in the Cooperative Extension Division, becoming Cornell's first female faculty member. Both published many books and influenced Cornell immensely. In particular, Anna Botsford Comstock wrote the famous Handbook of Nature Study currently in its 21st printing of the 24th edition. Several buildings have been erected over the years to honor the Comstocks.

The main building currently occupied by the Depart-
Specimens in boxes and jars filled most of the Entomological Laboratory where students studied insects in 1877 when the facility was located in McGraw Hall.

The entomology department appropriately bears the name Comstock Hall. Other sections of the Department are housed in Caldwell Hall, the Old and New Insectary, Dyce Laboratory, Schwardt Laboratory, and Blauvelt Laboratory. Its size indicated the growth that has occurred in the department over the years.

Presently, there are 30 undergraduates in the Entomology Department and 60 graduate students. This compares with the previous 13 in Comstock's time.

According to Edward H. Smith, Chairman of the department, “Entomology at the undergraduate level remains rather general. Consequently, some class sizes reaching 120 are handled well, provided that labs have no more than 20. But as we move to greater specialization at the graduate level, smaller classes are preferred.”

In the past month, John Henry Comstock, was honored at a conference for his important role in establishing this department while still an undergraduate at the University. Prof. Howard E. Evans, of Colorado State University, a graduate of this department and a former Alexander Agassiz Professor at Harvard helped open the conference by discussing “The Comstock Heritage.” Several other eminent scientists were invited to speak.

The symposium entitled “Insects, Science, and Society” surveyed the historical, social and scientific aspects of Comstock’s profound impact on the department. The main theme of the symposium was devoted to perspectives of entomology and their implications on man’s well-being. Consequently, the program not only encompassed insects but society as well. This theme truly reflected John Henry Comstock’s commitment toward his work throughout his life.

Many different facets of entomology can be studied at Cornell. Insect Physiology, Toxicology, and Biochemistry all involve the study behind the chemical machinery insects employ for successful living. Insect Ecology, Insect Pathology, Insect Morphology, Insect Taxonomy, and Aquatic Entomology, are other facets which are available for study. Every fall, von Frisch’s classical study on honey bees is also set up on campus. Many Liberal Arts students as well as biology majors enroll in this course.

Most students used to enter the department in their freshman year. Recently, quite a few transfer students from SUNY units are appearing on the scene.

Whereas in Comstock’s days, many of the students in the department had farm backgrounds, the contrast is true today. Most students migrate from urban dwellings. Smith feels that the ecological slant on today’s world has spurred this trend on.

In the past, many professors in the department had attended Cornell University. However, as other departments of Entomology have gained strength, Cornell is drawing upon these schools for its faculty.

Many challenging opportunities await graduates in entomology as the food and environmental crisis grows in intensity. Aside from these practical considerations, insects offer appealing models whose study will advance man’s knowledge of the field of biology.

Unlike any other classes of animals, insects number one million or more. Insects pose a unique challenge to man in his quest for knowledge. John Henry Comstock began Cornell University’s search of knowledge in this field 100 years ago. This head-start has allowed Cornell to have one of the top entomology departments in the country. Without a doubt, due to this never ending study, this department will be able to continue its growth and continue to remember its founder long into the future.

Comstock Hall on the Ag College quad is the main center for Cornell entomologists, although much of their research activities are carried on throughout various parts of the campus.
Governor Wilson Visits College Animal Center

On a visit to Cornell University recently, Governor Malcolm Wilson told a small group of farmers and animal scientists that he "wished consumers around the state realized what's involved in providing our food supply."

He spoke briefly on his first tour of the Teaching and Research Center near Harford, which is operated by the Department of Animal Science at the N.Y. State College of Agriculture and Life Sciences, Cornell.

The Governor was instrumental in recommending funds for the second building phase at the Center which will provide research and teaching facilities for sheep, swine, and beef cattle. Construction is expected to start this fall. The dairy cattle facilities are nearing completion.

In speaking to the group, Wilson indicated he is "keenly aware of the essentiality of New York's agriculture," and stressed the need for research. Also, he pledged his personal support to the research mission of the College and the State Experiment Station at Geneva.

Ag Fund

SUMMARY OF GIFTS

January 1, to October 1, 1974
to the College of Agriculture and Life Sciences Fund

462 Alumni and Friends have

contributed ........................... $313,373.88
73 Corporations have contributed ... 73,133.00
27 Organizations have contributed ... 14,885.50
15 Foundations have contributed ... 84,513.00

577 ........................ $485,905.38

For the same period in 1973, 523 gifts had been received for $167,898.63.

The College of Agriculture and Life Sciences Fund at Work:

In addition to the 96 students in the College that are receiving scholarship aid from the earned income of the Fund and other Funds established under the auspices of the College Fund, twelve innovative teaching programs have been established.

PICTURE CREDITS

Cover — Joe Comber; page 3 — Kermit Patton; page 4, 5, 6, 10 and 11 — Department of Communication Arts; page 8 and 9 — Cornell University Visual Services; page 12 and 13 — Department of Entomology.

in each college. R. D. O'Brien, Director of the Division of Biological Sciences, says, "We must match our facilities to our responsibilities. At this point, we are only accepting the number of majors that we can responsibly handle and still provide with a good biology background."

The Biology Division must also face the problem of being physically decentralized on campus. Presently, biology offices, laboratories, and classrooms can be found on all corners of the campus as well as off-campus.

Director O'Brien feels that "the number one objective now is to build the new biological science complex. We desperately need new facilities. That is what's keeping us from being number one in the country." A $50 million complex to serve this need will be located on lower alumni fields on campus. The completion date is unknown but the Biology Division hopes it will be soon.

Biology majors compose about one-tenth of the undergraduate student body at Cornell. Director O'Brien expresses several reasons that explain the popularity of biology today. "There is a national trend toward biological science — in part because of 'the pre-med syndrome.' 60 percent of the undergraduates pursue a pre-med program. Medicine is one of the few guaranteed professions — financial stability is coupled with an interest in serving humanity."

Director O'Brien also feels that "this is our time of the century. Biology itself is in a vigorous developmental state. Science-bent people lean toward biology now. It is the science that most closely relates to man."

On a national level, Cornell is well known for its excellent biology program. Director O'Brien says "one third of each entering class at Cornell wants biology as a major. Also, there are an unduly high percentage of biology applicants each year." The success of the Division of Biological Sciences speaks for itself.

A dynamic future lies ahead for biology at Cornell. Along with the expansion of the physical facilities, Director O'Brien expects several areas of cell biology, including immunobiology, somatic genetics, and animal virology to expand.

Speaking from a different viewpoint, Professor Fessenden-Raden expects growth to occur in the non-technical areas of biology, following the pattern of the proposed Biology and Society major. She also feels "the potential of students and faculty at Cornell is almost endless. The future should be very exciting for both studies and faculty here."

Cornell enjoys the excellence and uniqueness of its Division of Biological Sciences. Now, with the trend toward humanizing the biology experience at Cornell, the Biology Division deserves even higher praise. It's refreshing to know that people care about the human qualities that make education a true learning experience.
COUNTRYMAN

CAPSULES

Ray Axtell '76 and Anita Decker '75 have been appointed to the Board of Directors of the College’s Alumni Association, and Lois Anderson ’75 and Sandra Shemin ’75 have been appointed to the College Fund Advisory Committee. The student perspective on college concerns is increasingly being sought by the College of Agriculture and Life Sciences. This is the first year students have served on the board, and the second year students have been represented on the committee.

Keith Rayner Ph.D. ’73 has won a prize of $1,000 in the 13th Annual Creative Talent Awards Program sponsored by the American Institutes for Research in conjunction with the American Psychology Association. Each year the Institutes has held a national competition to identify the most creative doctoral dissertation in three broad areas of psychology. Rayner, who studied in the Department of Education, was the 1973 winner in the area of perception, learning and memory. His dissertation was entitled “The Perceptual Span and Peripheral Cues in Reading.” Rayner is currently an assistant professor in the School of Education at the University of Rochester.

Team Scores High
In Cattle Judging

Cornell’s all women cattle judging team took first place at the Eastern States Exposition Intercollegiate Contest at Springfield, Mass. recently. Linda Keene ’77, Carol Inglis ’77, and Barbara Snider ’76 also participated in the Pennsylvania All-American Contest at Harrisburg where they placed third.

In both contests, Linda Keene had the highest individual score of any contestant. The team was coached by Professor George Trimberger of the Department of Animal Science. Trimberger has coached the judging team for 24 seasons, during which time the team has earned the best cumulative average of all college teams in the nation. Seven of the 24 teams have taken first place in national competition. This is Trimberger’s last year of coaching before retirement.

Ruth Jillson Was
Friend Of College

Miss Ruth B. Jillson of Skaneateles, who established an endowment fund at the N.Y. State College of Agriculture and Life Sciences, died September 19, 1974.

The cash gift made by Miss Jillson, a champion of the sheep industry, was the culmination of 35 years of work with sheep. She had long been a friend of the College, encouraging her young friends to attend. The endowment fund provides for undergraduate and graduate student research on cancer, breeding and the reproductive physiology of sheep.

Miss Jillson was an active member of the State Sheep Breeders’ Association.

Sea Grant Institute
Created At Cornell

The creation of the New York Sea Grant Institute, as approved by the Boards of Trustees of both the State University of New York and Cornell University, was announced here recently by James F. Kelly, executive vice chancellor of the State University, and W. Donald Cooke, vice president for research at Cornell.

The new Institute, an expansion of the three-year-old New York Sea Grant program, will bring in, for the first time, the participation of other private and public colleges across the State. Funding will come from the National Sea Grant Program, the National Oceanic and Atmospheric Administration, and state and local sources.

As part of the National Sea Grant effort, the Institute will promote development of the State’s marine resources, including their conservation, proper management, and maximum social and economic utilization. Research and extension activities are the Sea Grant hallmark.

Modern Agriculture
Explained To Public

A century of progress in New York agriculture and the directions it will take in the future are examined briefly in a new leaflet from the College.

Primarily intended for general audiences, the publication presents a quick rundown on how agriculture has changed through the years to become New York’s biggest industry.

The six-page folder is titled, “In New York State, Agriculture is More Than Farming.”

The leaflet is available free from the Mailing Room, Cornell Research Park, Ithaca, N.Y. 14853.
In 1972 the Environmental Studies Program was created in the New York State College of Agriculture and Life Sciences. Its purpose is the coordination and encouragement of efforts to improve the quality of our environment through teaching, extension, and research activities.

Programs of study that emphasize environmental matters and lead to undergraduate or graduate degrees are offered only by departments in the College and by sections in the Division of Biological Sciences.

The curricula in the College are organized into nine broad program areas. One of these is entitled environmental studies.

Inquiries concerning the Environmental Studies Program should be directed to: Dr. Raymond C. Loehr, Director, Environmental Studies Program, New York State College of Agriculture and Life Sciences, 207 Riley Robb Hall, Cornell University, Ithaca, New York 14853.
Agricultural Sciences...

College Offers Many Opportunities

by JOAN B. WAGMAN '76

The original purpose of land-grant colleges in the United States was to prepare men and women for careers in farming and other forms of agriculturally-oriented employment. Many students were raised on farms and came to the land-grant institutions to learn new and better methods of farming. Though this is still the case with many of the land-grant schools in the mid-west, the situation at Cornell gives a different picture.

Although many students in the College of Agriculture and Life Sciences study agriculture, the scope and diversity of the fields offered for study is quite broad. About eight percent of the students in last year's graduating class intended to use their college education in the capacity of farm work; the rest of the class went into jobs in many different and varied fields.

Allen W. Perry, placement counselor in the College of Agriculture and Life Sciences, said that the College is ever-broadening its scope and "the diversity of fields open to the student makes it difficult to categorize exactly what job field the graduates go into."

Perry went on to state that although students preparing for medical school, law school, and veterinary school are increasing, a good percentage of each graduating class lands jobs in some area of agriculture.

Students are preparing for employment in the food industry in increasing numbers. Other strong areas of study are soil conservation, cooperative extension, and vocational agriculture teaching.

The trend of diversity goes hand-in-hand with the philosophy at Cornell of individualized study. Perry said, "There is more and more overlapping of major areas of study to meet the continued broadening of interests of the students. The College offers a wide range of programs and students go into virtually every field, including such things as banking and finance, which is unusual for graduates of agriculture colleges."

Since the draft ended there has been a decline in the numbers of graduates going on to further study, but about 30 percent of each graduating class for the past ten years has gone on to graduate schools of one kind or another. Perry said that the graduate work done by students is as diverse as the undergraduate work completed here at Cornell.

Perry thinks that the diversity in educational opportunity at this College is a good trend, and he hopes that it will continue to grow. The combination of the tightening up of the job market and the overabundance of college graduates, puts pressure on students to consider many kinds of job possibilities. "The student must come to grips with and make sense from the possibilities, and determine individually which career he wishes to pursue."

Perry has found through his contact with the student body that "most students have some directions; the major problem is implementing that direction in deciding upon a career." The students search for jobs themselves, aided by the Placement Service which arranges such things as interviews with large business firms on campus and listing employment openings. But finding a job is "up to the student."

And so, though many students go on to graduate schools or find jobs in fields that are not related to agriculture, the records show that many students do seek...

(Continued on page 11)

"Students are not here just to learn how to produce more and better crops. The mass effort to upgrade the standard of living of rural people makes for jobs dealing with many aspects of rural life."

About 30 percent of those from recent graduating classes pursue additional education. Areas of graduate study that attract many students include food science and agricultural research.
Paths and Walkways . . .

Exploring The Scenic Environment

by LYNN DICKEY, GRAD

The long-standing academic tradition and reputation of Cornell is not the only resource which has continually lured students and visitors to the University. The startling natural beauty of the campus has been a prominent aesthetic attraction for Cornellians throughout its history.

A unique system of footpaths and walking trails has been developed over the years to provide direct access to many of the scenic areas of the campus.

Two of the most famous trails border the steep hemlock-lined gorges which bind the campus on the north and south. Both the Cascadilla and Fall Creek gorges share historic pasts which greatly precede the development of Cornell. The two rugged ravines were scoured out of the earth by early glacial advances. As a result, the streams flowing between the steep banks tumble to the lake below, creating the famous cascading falls.

Preservation of the exquisite breath-taking beauty of the gorges and natural wooded areas of the campus has long been a concern of Cornell. In 1882 the University trustees purchased the land along Fall Creek Gorge to prevent any undesirable residential development. A proposal for paths leading through the ravines and for the development of an arboretum was also suggested at that time by Professor Prentiss, an instructor of botany, who was given responsibility for the University grounds.

In 1896 a dam was built by Ezra Cornell above the Triphammer Falls which submerged the former swampy area behind it to create Beebe Lake. Immediately after its formation the lake became an athletic and recreational center for the University. Today the Cornell Plantations trails stretch around the twenty-acre area of the shallow man-made lake.

The early landscaping of the campus progressed in 1903 when the landscape architect Charles N. Lowrie proposed a plan for several new walks and paths needed in the interior of the twin gorges. A few years later a trail was created from the top of Ithaca Falls to Central Avenue.

Prior to Lowrie's pathway proposals the terrain of the Cascadilla area was an extremely primitive passage. The repetitious climbing and descending which seems to characterize any pedestrian travel on the campus was an even greater obstacle for the earliest students. Those

“During the winter months the tumbling gorge streams are transformed into static crystalline icicles and overhanging pines heavily weighted with snow cling to the rocky crevices.”

During the winter months the tumbling gorge streams are transformed into static crystalline icicles and overhanging pines heavily weighted with snow cling to the rocky crevices.”
living in Cascadilla had to slide down the steep bank of the gorge, cross the stream on a rather unstable wooden bridge, scramble up the opposite bank, and then were forced to continue on their expedition trudging up and down the remaining smaller ravines en route to campus—a journey rugged enough to make the most dedicated student think twice before scurrying to an eight o'clock class. Those students unfortunate enough to live in attic rooms of houses downtown had to scale the four hundred foot East Hill by a path which cut through the village cemetery along the north side of Cascadilla Creek, appropriately named the "bone-yard cut." Fortunately an omnibus service was instituted in 1876 which alleviated some of the hardships of climbing the hill.

In 1915 Lowrie designed the walks and steps in the Fall Creek and Cascadilla gorges which were masterfully integrated into the natural rock formations beside the falls. The architect's recommendations for extending lower-level gorge trails were executed throughout the following twenty years. During the 1920's, Trustee Henry W. Sackett financed the extensive renovation of new trails in the Cascadilla Gorge. Improvement of the lower trails enabled one to view the plunging falls from the cool wooded depths below. Many of the present campus trails and paths have emerged from Lowrie's original conceptions and designs.

During the period of the 1930's more paths were completed. The local Civilian Construction Corps camp provided labor at no cost to the University for the development of several miles of footpaths throughout
Adding A New Dimension To Agriculture

by DWAYNE E. POWERS '75

The N.Y. State College of Agriculture and Life Sciences at Cornell University has established a special program of adjunct professors for members of minority groups.

In the spring of 1971, the trustees of Cornell University established the title of Adjunct Professor. Provost Plane explained the adjunct professorships as “part-time positions intended for individuals engaged in professional work, research or scholarship, outside of the University. Individuals appointed to an adjunct professorship are to have academic qualifications in terms of levels of formal education comparable to regular faculty members and/or possess scholarly qualities, creativity and other attributes associated with productive faculty members.”

Credit must be given to Dr. Charles E. Palm, former dean of the College and now Liberty Hyde Bailey Professor of Agricultural Sciences, for initiating the program.

One of the purposes of the program, Palm said, is that adjunct professors will provide an opportunity for the College to improve its on-going recruitment efforts to increase the number of full-time faculty members from minority groups.

He pointed out that today it is difficult to find qualified candidates among American blacks, for example, for professional appointments in many of the diverse program areas of the College.

“If in fact, they exist, they are few in number and to bring them here would only take them away from another institution,” he said. “Consequently, we need to explore ways and means to increase the number of trained men and women from the minorities for professional careers in modern agriculture and the agricultural sciences.”

Under the program, adjunct professors will play an important role in assisting the College and its departments in their future planning to train more minority members for professional roles in agriculture and life sciences.

“By keeping in contact with adjunct professors, we can share experiences and they can tell us where we can help them,” Palm explained. “Such contacts make a two-way street out of the effort and work toward a more acceptable solution of the present shortage of qualified professionals among the minorities in agriculture.”

He pointed out that historically the College has not attracted many students from the minority groups, especially American blacks, in areas other than education and, to a limited extent, in the social and biological sciences.

Dean Palm originally allocated limited funds to a program to support adjunct professors who, in addition to expertise in the agriculture and life sciences areas, can assist with recruitment and/or development of staff members from minority groups. In previous attempts to develop programs that could increase representation from minority groups on the faculty two factors became apparent:

First, we must be careful not to raid those institutions with established programs in these areas but rather to work with them to share some of their guidance in increasing the numbers of trained individuals available.

Second, it appears that we must work with those institutions, especially the 1890 land-grant institution, in providing graduate training to individuals from minorities. In many cases it will best serve the ultimate goals if we train candidates for our own staff positions.

The program is successfully underway with outstanding support from the adjunct professors. As of today the College has six adjunct professors; they are: J. H. Bernie — Biochemistry; J. Wallom — Floriculture; K. F. Jerkins — Education; F. B. Sands — Pomology; B. T. Whatley — Vegetable Crops; and H. Wilson — Plant Pathology.

In the future the program plans to have still other professors who will ultimately represent all fields of study at the College. Further, if additional funds can be found, it is hoped that a master’s degree program can be initiated for minority students in those departments that are of interest to them. A professional master’s degree would permit students already employed to take leave and receive an updating of their training for a return to their former position. A program in the agricultural sciences or other appropriate areas in the graduate program of the College would enable those students desiring further graduate work to take a Master of Science program. It could then be followed with work toward the doctorate. In this way, students would be trained for improving their current interests as well as for future positions in modern agriculture.
Upon returning to Cornell this fall, I soon became aware again of the frequency with which fire trucks speed across campus — only to return moments later on their way back to the firehouse. Another false alarm. Why? What are the reasons behind these alarms? I soon discovered that the nature of the problem was broader than I had expected.

The Ithaca Fire Chief's report for 1973 showed that the number of malicious false alarms was rising annually, the number of accidental alarms dropping. (An accidental false alarm is one caused by mechanical error or by someone unintentionally setting off an alarm.) The rise has continued into this year. By August 9, the number of malicious false alarms had already exceeded the total for all of last year.

On the Cornell campus this year, the number of false alarms (accidental and malicious) has been four times the number of actual fires. Last year, the difference was nowhere near as large — 142 false alarms compared with 101 actual fires. A record was reached last year for total number of alarms in Ithaca; 47 percent of those alarms were at Cornell. Hopefully, we will fall below that record this year.

In cases of malicious false alarms on campus, the Safety Division assumes the responsibility of finding the offender. The division is successful in about 50 percent of the cases. Any Cornell student charged with calling in or intentionally causing a false alarm is brought before the Judiciary Administrator for disciplinary action. Any outsider (non-student) is turned over to local authorities.

The search for the offender may take only minutes or may extend for a month or more, in which case it is usually handled by Safety's Detective Division. Often during such longer investigations, what was originally thought to be a malicious alarm turns out to be accidental. For example, someone unintentionally sets off an alarm, then panics and flees, leaving the appearance of a malicious act. Investigation into such an incident ends once the authorities are convinced of the suspect's lack of harmful intent.

Although the number of malicious false alarms is rising, the larger number of false alarms are still accidental or unintentional. At Cornell, these accidental alarms are often the result of mechanical, rather than human, error. This is quite understandable once you examine the complex alarm system needed to insure the safety of Cornell students and employees.

The maintenance of this system is one responsibility of the Department of Life Safety Services. Department director Eugene Dymek explained to me how the alarm system is set up. There are five different types of fire detection mechanisms used at Cornell. In some buildings, sprinkler systems are employed. On the sprinkler head, there is a small piece of soft metal (bismuth) which will melt when exposed to excessive heat, opening a valve and allowing the water to stream out. Inside the pipe, the water flow moves a small lever which completes an electric circuit and sets off the alarm.

There are also three types of heat detectors: one which sets off an alarm if the temperature rises 15 degrees per minute or faster; another which goes off if the room reaches a certain temperature; and a third which reacts to gaseous products of combustion. Finally, there are the manual pull stations (alarms) which are situated at building exits. If any of these devices are triggered, the signal goes to a control box in the building, then to the Safety Division's master control panel in Barton Hall, from which the alarm is relayed to the fire department.

With such sensitive equipment, a number of things can happen which set off the alarm, indicating a fire when there is none. In the sprinkler system, for instance, a change of pressure in the pipes might cause a sudden surge of water which could actuate the water flow alarm. This problem has been largely corrected by installing special alarm retarding devices which compensate for fluctuations in water pressure.

Bad positioning of the heat detectors caused a number of false alarms in Statler Hall and in some North Campus dormitories last year. Often the problem was that the steam from a hot shower would raise the temperature of the room faster than 15 degrees per minute, triggering the alarm. However, these and other bugs in the system are rapidly being corrected by the Life Safety Department.

Mr. Dymek believes the performance of the alarm system is exceptional considering the number of people (over 15,000) and the size of the area being protected. He also points out that in the time he has been with Cornell — since 1967 — the system has never failed to detect an actual fire.

The difficulty remaining, then, is how to curtail the rise in malicious alarms. The answer must lie in the individual's recognition that any tampering with fire detection equipment jeopardizes all of us.
Judging from their keen interest and warm enthusiasm toward the subject, those who attended the recent open house activities at Cornell’s Arnot Teaching and Research Forest are earnestly searching for ways to reduce fuel costs. Some 300 students and area residents were on hand at the outdoor laboratory near VanEtten, New York, to explore its resources in providing answers to questions about using firewood as a fuel source.

The day-long event featured a drive-it-yourself tour, which gave those who followed the designated route an opportunity to inspect the facilities and observe a variety of conservation practices.

Highlight of the event was a firewood preparation demonstration. Among the topics was tree selection on the basis of both firewood production and timber stand improvement. Other subjects covered were felling and bucking with emphasis on safety, including skidding logs (upper left photo); using a chain saw (lower left and below) to produce lumber in the woods; and splitting firewood (upper and lower right) with mechanical log splitters.
Guerrilla Television ... A Medium For The People

by RODNEY BROOKS '75

The Ithaca Video Project (IVP) began in 1971 when a small collective of people with a common interest in the visual arts began to pool their efforts. Through the use of portable videotape equipment they hoped to stimulate interest in the arts, but the major concern was "street culture." The group was later funded by the New York State Council of the Arts, and it was suggested that IVP broaden its appeal to work with more community organizations.

IVP in 1974 has a new office in Ithaca's Miller Building, a staff of eleven, both tape and film libraries, videotape equipment for use by community groups, and plans to expand its many public services.

"We are still a not-for-profit educational organization," said IVP administrator Joseph A. Seale. "We are trying to make portable, half-inch black and white equipment available to the local community."

Seale said the project has progressed to a media agency from a video collective in the past year. He described the changes.

"For a time we operated out of the Greater Ithaca Activities Center," he said. "Our early tapes involved poetry readings, drugs in Tompkins County, and the struggle of Native American people in New York State. "We are now expanding and are doing more public workshops and plan to develop a video theater so local people can come in and see videotapes on almost any subject they can imagine," Seale said. "Some of the workshops will be in conjunction with Tompkins-Cortland Community College so people can get credit."

Seale reported that the organization is working on three levels:

"One level is to make equipment available to non-profit organizations and community groups," he said. "We want to offer video media equipment at the lowest possible cost.

(Continued on page 12)
OPPORTUNITIES continued from page 3

employment after graduation in some way related to agriculture. The figure of eight percent of all graduates going into farming may not at first appear impressive, but when the fact that only six or seven percent of this country's population is engaged in farming, the significance of this eight percent figure becomes evident.

This emphasis on agriculture is marked by the interrelationships of the biological and life sciences taught at the College. "In 1972, the College of Agriculture changed its name to the College of Agriculture and Life Sciences," said Perry, "and these fields of study are interrelated. One needs a college background these days to become successful at farming, and coupled with that is research in agriculture and the extension service. The College still plays a vital role in agriculture in New York State."

Some of these interrelated and individualized areas of study — and employment — include many aspects of environmental technology and conservation, wildlife research and management, teaching agriculture in secondary schools, and agricultural research of many types. A good example of this interrelated concept of study is the agricultural engineering course of study; many graduates are now going into waste management, which has recently become "a whole new dimension" in the job market.

Perry sees the change of the name of the College as trying "to reflect this focus. Students are not here just to learn how to produce more and better crops. The mass effort to upgrade the standard of living of rural people makes for jobs dealing with many aspects of rural life." For instance, one might think that communication arts, which offers a major program of study here at the College, may have nothing to do with agriculture, but many professors, as well as students in this department, are actively engaged in disseminating information about health, nutrition, farming methods, and child care, along with other information to upgrade the rural standard of living.

Perry was happy to say that prospective employers are "recognizing the diversification of study at this College. Employers who are looking for people with a mixture of applied orientation as well as theoretical knowledge are setting up interviews with agriculture students now, as well as with students from the other colleges at the University."

From all indications, the College should continue to grow along these lines, preparing students for a wide array of jobs.

Demand for consumer educators is increasing. Job opportunities in this field are growing as efforts are made to raise rural and urban standards of living.

In relation to land-grant university national percentages, a high number of Agriculture and Life Sciences' graduates prepare themselves for careers in farming and agribusiness.
"The second level would apply to artists and independent individuals who have creative ideas for the use of the medium."

"Finally, we are available to the business community to produce public relations documents and consultations. We have equipment available for rental at reduced rates. Our primary rental is the one-half inch portapacks. We have editing facilities that people can rent time on. For larger projects we have to rent equipment from other agencies.

"We invite individuals to submit proposals for videotape and other media work. We expect this year to have things on the local cable and we maintain a tape library for closed circuit screening."

"We have monthly programs where we show the latest tapes on hand and encourage discussion. We also have media-related literature that people can browse through when they come."

Seale said the workshops will cover a wide range of interesting areas.

"The workshops deal with techniques from beginning to end," he said. "We have photography and other visual-oriented media workshops. We will have two seminars that will explore the social implications of television and television administration."

"We see ourselves as educational and informational. Our library is primarily of things happening in Ithaca. One of our most recent programs was the tape of the Afro-American show at Cornell giving a more in-depth interpretation of the show. We did a tape of a discussion of local high school students and law enforcement officers about drugs.

"We hope to have more equipment that can be made available to the public. We expect to get continually more involved with local agencies. At the moment we are working on a number of video projects. These range from a Haitian documentary, to media experiments, to work for local United Farm Worker's people and the Tompkins County Chamber of Commerce. Also, there will be more work with Cornell and perhaps even a weekly newsmagazine show. In the spring we plan to produce several mixed-media carnivals that will travel to various parts of the area. These will be titled, "Visual Massage."

"We are trying to do more business to keep alive," he reported. "Because we are non-profit and like to keep rentals low, we depend on tax-deductible donations."

Seale explained that with videotape equipment anyone could be a television producer, because it is less expensive to operate.

"Just about anyone off the streets with an idea can, with a short workshop, produce programs of personal interest which technology has now allowed, for television. You can do a videotape and have it edited to be put on television.

"If the stations were more responsive we could provide more viewing alternatives. We expect them to become more responsive as people begin to inquire and request to see more things. As always, it depends on people becoming more interested and letting the stations know that they want to see a greater variety of programs and activities.

"We feel video allows for new and creative types of expression," he noted. "We believe people should have more choice in what they can see on television."
EXPLORING continued from page 5

other areas of the Plantations Arboretums. Current efforts to retain the dramatic natural landscape settings accessible by the pathway systems have also been pursued. In 1965 the Vice-Provost Thomas W. Mackesey assured the University that no buildings would be constructed in the Fall Creek or Cascadilla gorges. Continuous maintenance of the campus trails has also been a predominant interest. Responsibility for maintaining and repairing the pathways is the responsibility of the Cornell Plantations.

During the winter months the tumbling gorge streams are transformed into static crystalline icicles and overhanging pines heavily weighted with snow clinging to the rocky crevices. But the dramatic beauty of the gorges disguises the treacherous hazards of slippery ice-covered trails. When snow removal becomes dangerous the trails are officially closed by the University for the winter season.

Maintenance of the walkways, especially along the steep gorge precipices, is extremely expensive. Financial support for necessary renovation of the trails is provided through federal funds and the partial support of the State Colleges, the University, and through private contributions. In 1972 the gorge trails suffered severe flood damage from Hurricane Agnes. The federal government provided $125,000 for renovation of the devastated Cascadilla Gorge trails. As a result of the new 1973 construction the present trails are more durable.

Continuous maintenance and appreciation and respect from those who use the pathways will insure future accessibility to the rugged and varied areas of natural beauty unique to the Cornell campus. In this way Henry Sackett’s wish inscribed on the rocky wall beside the Cascadilla Falls may be realized in that “all who dwell or sojourn here might find in them as he himself has found a perennial delight and a spiritual treasure.”
Talking Plant Teaches Children

Probably the world's first "talking plant" has made its debut in New York State.

A Cornell University floriculturist has created a flowering plant model that can talk to grade-schoolers, and the children are soaking it up.

Made of plastic parts, the talking plant tells the ABC's of plant life and why plants are important to man and his environment.

The creator of this talkative plant is Prof. Ernest F. Schaufler in the Department of Floriculture and Ornamental Horticulture, State College of Agriculture and Life Sciences.

The talking is actually done by a cassette tape recorder, hidden in a make-believe plant root zone — a wooden box that serves as the base of the model. The voice is that of Robert DeLong, a fifth grader of Belle Sherman School in Ithaca.

The plant model has 16 components — stems, leaves, flower petals, and other essential plant parts — which children assemble as they listen to the tape.

An over-sized honeybee alights on the large, white flower to get at the sweet nectar, climaxing the "talking plant session" that deals with plant parts and the role each part plays.

The teacher can stop the tape recorder at any point to discuss the plant parts and compare them with live plants in the classroom.

The basic idea of the model is to convey to youngsters what plant science is all about, with emphasis on "the place of plants in our environment," Schaufler explained.

Schaufler, who has had long experience working with 4-H youth throughout the state, thinks that the talking plant is doing the job quite well.

"Teachers like it, and the children are enthusiastic," agreed Ms. Joann Gruttadaurio, who works with Schaufler in this project as a program aide. In fact, she is getting many "fan letters" from children who have listened to the talking plant.

"As a teaching device, it's proving to be a real attention grabber," she noted. Ms. Gruttadaurio, an agronomist by profession with a degree from Cornell, tested the talking plant early this spring in three elementary schools in Ithaca, VanEtten, and Cortland.

Encouraged by favorable reactions to the approach, Ms. Gruttadaurio and Schaufler began contacting schools in other counties through 4-H agents.

Now more than 100 schools in a dozen counties have signed up for the plant model. So far, six plant models have been built.

"These models have been solidly booked through the end of the current school year, and we cannot take any more schools," Ms. Gruttadaurio said. "We could have gone further, had we had a few more models and time."

She has been responsible for testing the plant model and developing teaching materials for use by teachers. She has conducted workshops in many counties involving more than 400 teachers.

The project, funded by the New York State 4-H Foundation, resulted in the first model in December, with the help of the staff in the Visual Communication Section of the College's Department of Communication Arts.

The talking plant model is used in the second part of a three-part plant science program. The model is accompanied by a series of visual charts and illustrations showing different types of plant parts.

The first part of the plant science program reviews general facts of plant science. The second consists of assembling the plant model, and the final part features a slide presentation of annual flowers to interest the children in growing plants.

Materials developed for use in the sequence include a comic book published by the Soil Conservation Society of America. Its title is "Plants: How They Improve Our Environment."

PICTURE CREDITS
Cover — Peter Gilbert; page 3, 6, 11, 14, 16 — Dept. of Communication Arts; page 5, 13 — Cornell University; page 8, 9 — Douglas Payne; page 10, 12 — Ithaca Video Project; page 4, 13 — Cornell Plantations.
Fred L. Trump '49, information specialist for the U. S. Soil Conservation Service, Salina, Kansas, has received a commendation award from the Soil Conservation Society of America for his Service to the society’s Salina Chapter. Fred was cited for his efforts as chairman of the chapter’s information committee, which oversees publication of the chapter’s newsletter.

Isadore Roy Cohen '48 has been appointed group vice president of S. B. Penick & Company, a unit of CPC International, Inc. with headquarters in New York City. He has been involved since graduation in the antibiotic fermentation industry, specializing in the animal feed additive section.

Among those cited for a distinguished service award by the National Association of County Agricultural Agents at their 1974 meeting in Tucson, Arizona, were Roger W. Lord '57 and Paul C. Mattern, Jr. (M.S. '68).

Lord, a veteran of 13 years in Cooperative Extension work, was recognized for his work in local Extension staff development, promotion of better understanding of local government, and his flood damage recovery programs following Hurricane Agnes in 1972. An agent in Cattaraugus County for nine years, he was recently appointed coordinator for Cooperative Extension in Onondaga County.

Mattern, a 20-year Cooperative Extension veteran, was recognized for his work with local government units in land-use and development planning, which led to the eventual appointment of a county planner in Delaware County, N.Y. In addition, his efforts to promote livestock enterprises has resulted in increased beef and swine production. He was also instrumental in gaining more staff support for the county’s dairy industry.

Effective Communication
New Home Study Course

“Effective Communication” is the seventeenth and newest course to be offered by Cornell University’s Home Study Program in Food Industry Management. The course is designed to overcome the specific types of communication gaps that prevent food industry employees and managers from fulfilling their jobs effectively.

The course focuses on the need to help managers give clear directions, gain willing cooperation from those they supervise, receive prompt replies from those who supervise them, and prevent the confusion which occurs when messages or directions are misinterpreted. All the basic activities of communication are discussed, with special attention given to listening, a skill that is frequently overlooked or neglected when people think about communicating with others.

Catalogs, brochures, and applications for “Effective Communication,” as well as the other 16 courses offered by Cornell, can be obtained by writing to the Home Study Division, 250 Warren Hall, Cornell University, Ithaca, N.Y. 14853.

College Receives First Kodak Educational Grant

The State College of Agriculture and Life Sciences has received a $2,000 unrestricted direct grant under Eastman Kodak Company’s 1974 Educational Aid Program.

This is the first year the College has received a grant under this program. The money will go into the College Fund, an endowment fund that provides scholarship aid for undergraduate students and supports innovative teaching programs in the College.

Cornell Dairy Days
Set For January 14–15

The Department of Animal Science has announced its annual Dairy Days program for January 14-15, 1975 in Morrison Hall on the Cornell University campus at Ithaca, N.Y.

Dairy waste management for environmental quality, herd health problems, and new research developments will be featured.

The program opens Tuesday, January 14, at 1 p.m. with a keynote address by Eugene C. Meyer, editor of “Hoard’s Dairyman,” a national dairy magazine. Meyer will give his views on “What’s Ahead For Dairy Farmers.”

Dairymen and industry personnel from throughout New York State and the Northeast are invited to attend.

Scientists from the State College of Agriculture and Life Sciences will discuss environmental regulations affecting dairy farm operations, including disposal of milkhouse and dairy manure wastes.

Reducing calf mortality and losses due to reproductive diseases, as well as New York’s mastitis control program, will be feature presentations of the herd health sessions.

New research applications will be presented on school lunch milk marketing, forage testing developments, pregnancy check technology, calf nutrition, bull semen pricing, and pit storage for manure.

A special update on the 1975 economic forecast for milk marketing and the dairy feed supply situation will be given.

Program details, banquet and parking reservations, and lodging information are available from Cooperative Extension offices, or direct from: Dairy Extension Office, Morrison Hall, Cornell University, Ithaca, N.Y. 14853.
Unsure about your life-work? Contact can help.
The Student Alumni Contact Program is a plan to help you learn about vocational alternatives from firsthand experience. Through Contact, you can spend a week or two working directly with an alumnus of the College who is professionally employed in your field or a field you may be considering.

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Countryman Interview...

Dr. VanDemark Discusses Research Program

Dr. Noland L. VanDemark is director of research at the College of Agriculture and Life Sciences, director of the Cornell University Agricultural Experiment Station, and professor of animal science. Prior to receiving these appointments a year ago, he was professor and chairman of the Department of Dairy Science at Ohio State University.

In his capacity as director of the Experiment Station, Dr. VanDemark serves as the chief executive officer in the administration of research grants from the U.S. Department of Agriculture and cooperative projects in the College, the New York State College of Human Ecology, and the New York State Veterinary College. As director of research, he represents the dean's office in providing leadership in the development and administration of the College's overall research effort.

In this interview, Dr. VanDemark examines the influence and importance of agricultural research to the well-being of the people served by the New York State College of Agriculture and Life Sciences.

Countryman: From an examination of this country's agricultural success story, it is obvious that research has played a dominant role. Would you care to comment on the contributions agricultural scientists have made to our abundant food supply?

VanDemark: The fact that the average American farmer today supplies enough food to feed himself and his family, and not too many others, is dramatic evidence of the success of American agriculture. When compared with the situation before the turn of the century, when a farmer fed himself and his family, and not too many others, the dramatic changes in the past 75 years, and more particularly the past 35 years, show up as truly outstanding. Many of the outstanding developments like hybrid corn, artificial insemination, use of fertilizers, pesticides, herbicides and growth regulators, advances in mechanization and electrification of many of the tasks performed on the farm, have come largely from the efforts of agricultural scientists, who have permitted the release of labor from the farm. This in turn has permitted our society to fare well with less than five percent of our population on the farm.

Countryman: But in view of the problems we are facing today — an impending economic squeeze and food shortages brought on by worldwide demands — how do you equate the present and future role of agricultural research?

VanDemark: The challenge to agricultural research will continue to grow, for we have never in history had a situation where the world food supply in relation to the number of people needing food has placed us so near the level of disaster for millions. If agricultural research does not respond or is not able to respond because adequate funds are not made available, we may only be hastening the day when mass starvation will be upon us. The American colleges of agriculture as well as similar institutions in many of the developed countries are faced with the tremendous challenge of conveying to the developing parts of the world the know-how in producing food to avoid such disasters. We simply must find more effective ways to produce food without depleting our energy supply to the point where energy becomes the critical factor.

Countryman: Looking closer to home, what special challenges now face the College's research resources in meeting farmer needs and maintaining a vigorous, dynamic New York State agriculture?
"Research is conducted to find answers which will benefit people in general as well as the rural population. Consumers have been the major benefactors of agricultural research through the maintenance of food supplies at low cost."

VanDemark: In New York, just the same as in many other states, one of the major challenges is to increase food production in the face of unfavorable economic conditions. We are going to have to make some hard decisions concerning land use, so that we do not further deplete the available agriculturally productive areas. Both of these issues call for careful individual and group decisions to keep things in balance. In the College we are making the issue of increased food production, good land use planning and efficient use of energy high priority items on our research list. However, this does not mean that we are going to turn our backs on continued attempts to protect the environment, or abandon our pest management efforts, or ignore critical food science and human nutrition needs. Nor are we going to forget about the effect of these many items on the social and economic adjustment problems which plague the rural areas.

Countryman: In your opinion, is research keeping pace with the needs of agriculture in New York State?

VanDemark: Agricultural research in New York has paid big dividends to the consumers of the state, nation, and even internationally. However, in the last few years we have been falling behind because inflation has gradually been eroding away the resources available to conduct research. In general, state and federal legislative bodies have not been moved to respond to the needs which are now so evident in the present world food and energy situation. I am not saying that more adequate funding could have stopped the development of worldwide food shortages, but if we hope to cope with the developing problems we will need all of the know-how we can muster.

Countryman: What are some of the problems currently receiving the attention of the College’s researchers?

VanDemark: That is a difficult question to answer because of the wide extent of our research efforts. Between the Experiment Station here and Geneva we had 711 research projects underway during the past year. Some fifty-six percent of our research efforts were directed toward food and fiber production, protection, improvement of quality and the marketing of these. Some 13 percent of our total personnel efforts went toward research involved in improving the environment and conserving our natural resources. Approximately 15 percent of our efforts dealt with social problems, consumer well-being and international agricultural developments. The remaining 16 percent we classified in a category called knowledge development which was spread proportionately over each of the other three categories.

Countryman: How would you describe the mission of the College’s research program?

VanDemark: The Cornell University Experiment Station was organized in 1879 for the purpose of promoting agriculture by scientific experimentation and investigation. The Agricultural Experiment Station was organized in 1887 in anticipation of the passage of the Hatch Act which has resulted in the appropriation of federal funds for partial support of state agricultural experiment stations ever since. While the mission of the College’s research program has followed this path for many years, I would emphasize the fact that research is conducted to find answers which will benefit people in general as well as the rural population. Consumers have been the major benefactors of agricultural research through the maintenance of food supplies at low cost. However, our primary thrust is still concerned with agriculture and the related problems.

Countryman: The College’s program efforts are directed primarily in the areas of teaching, extension, international agricultural development, and research. In what ways are research activities related to the other three programs?

VanDemark: Research is the primary knowledge generating aspect of the College’s program. Teaching, extension and international agricultural development depend heavily on the products of research. Our land-grant system here in the United States is unique in the world in that we do maintain a close relationship among the teaching, extension and international development programs, thus getting information generated by research to the people in a relatively short time. This is one of the reasons why American agriculture has been so successful. New knowledge is put to work quickly after it is learned or discovered and the farmer and the consumer in general benefit.

Countryman: All things being equal, what do you consider the College’s primary research commitment, that is what area should be given the most attention or emphasis? Why?

VanDemark: In my reply to one of your earlier questions I indicated that at the present time we were much concerned about increased food production. That, with some of the other areas I mentioned, is at present receiving considerable attention. However, I think that in general our responsibility is to be responsive to the problems facing us which can be helped with the kinds of expertise we have in the College. We must be responsive to needs, and perhaps even more important, we ought to recognize and predict where needs are going.

"Research is the primary knowledge generating aspect of the College’s program. Teaching, extension, and international agricultural development depend heavily on the products of research."
Dr. VanDemark emphasizes that the role of agricultural research is to help this country maintain abundant, high quality, and reasonably-priced food supplies and to contribute knowledge to all people seeking solutions to food production problems.

ing to develop and get answers before the problems become critical. This means our university people need to be in touch with the realities of everyday living but at the same time be capable of using their imagination and creativity to anticipate what the needs for basic information will be in order to solve those real problems as they come along.

Countryman: In the past we have listened to debates regarding the merits of basic research versus the practicality of applied research. But today the central issue seems to revolve around arguments over the amount of agricultural research being directed to problems in the social and behavioral sciences as opposed to straightforward technological matters. How do you view these concerns?

VanDemark: With some of the developments that came as a result of World War II and later war efforts, the space race, and the cry for more attention to human health problems, we have gone through one of the greatest eras of technological development ever. Some people have felt that we have ignored the social and behavioral sciences and the well-being of people in favor of these technological developments. In my way of thinking it is not so much the matter of the technological developments that cause the problems, but rather our own thinking and capabilities of utilizing these developments. We obviously must use the technology to benefit mankind and not to increase his social and economic stresses. We are faced with many difficult people problems. We must deal with these, and we must integrate our technological knowledge with man's social and economical needs. Thus we cannot afford to neglect the problems in the social and behavioral sciences even though we may be forced to respond to issues like the world food problem.

Countryman: It is frequently said that one of the main reasons the public is often reluctant or unwilling to adequately support research programs that benefit all of us is that the average person does not appreciate or understand how scientists work and what they are trying to accomplish. In what ways, if any, do you see this problem impeding the work of our agricultural experiment stations?

VanDemark: It is true that the average person often does not understand the objective of research efforts, and usually any of us are not very supportive of things we do not understand. In some respects scientists have often been at fault because they have been unwilling to take time to explain the purposes of their efforts in an understandable fashion. In today's real world in public institutions such as the College of Agriculture and Life Sciences we have to realize that we are dependent upon support from the taxpayers. Thus we must make a real effort to develop understanding rather than simply issuing a bunch of facts about the research we are doing.

Countryman: How might we go about educating the public to the needs and benefits of agricultural research?

VanDemark: First of all each researcher ought to be willing to give a little of his time to help those around him to understand what he is attempting to do. We need more efforts through the mass media to tell and show the American public how they have benefited from agricultural research. They need to emphasize what life would be like if these contributions had not been made. The stories need to be told so that people understand.

Countryman: Experts in the agricultural economics field point out that the United States needs to expand food production in order to lower food prices. How does the agricultural research component fit into this picture?

VanDemark: The economics of food production and food cost becomes a very complicated and often a very emotional factor. For many years the consumers of the United States have enjoyed relatively low food prices. This was possible because farmers were supported in their efforts so that what was referred to as government subsidization of the farmer was in effect really subsidization of the consumer. Now the complicated cost/

(Continued on page 18)
Animal Acupuncture...  
Dr. Delahanty’s Needlework  
by BONNIE R. SCHNEIDER ’76

If certain animals in Cornell’s large animal clinic could talk, perhaps they’d tell Dr. Donald D. Delahanty what he’s doing right — or wrong — with his needles. For Dr. Delahanty, professor of veterinary surgery at the New York State Veterinary College, is performing acupuncture on these animals — a system of medicine for the most part untested in this country.

A working definition of acupuncture is the original Chinese practice of puncturing the body to cure disease or relieve pain. Dr. Delahanty was on leave from the Veterinary College during the fall of 1973, spending two weeks in Japan studying acupuncture techniques. His contact was K. C. Usui, an agricultural faculty member at the University of Tokyo and a former graduate student of Dr. Delahanty.

“What electrical frequency should I use? How long? How many treatments should I give? How often?” There are “a lot of basic questions” yet to be answered about acupuncture, Dr. Delahanty said, and these are some he has personally encountered. But Dr. Delahanty does not question the validity of acupuncture itself. “It’s a needed area of medicine with much potential,” he said in a recent interview.

“I’m reasonably pleased with the outcome of my cases,” Dr. Delahanty added. Mainly he treats problems of arthritis, chronic pain, and lung and gastrointestinal difficulties in large domestic animals such as horses and cows.

“Garbage cases are the ones I get. Everyone else drops them, and I pick them up,” the scrub-suit clad veterinarian said wryly. His procedure is to make an initial diagnosis, then refer to medical indices for information which is “often contradictory,” Dr. Delahanty commented. “Most of the acupuncture literature is on humans. That’s the big problem.

“There are no cookbook treatments. Some animals respond, some don’t,” Dr. Delahanty said.

Dr. Delahanty uses a hand-sized electrical generator...
A variety of questions need to be answered regarding the treatment of animals through acupuncture. One of the main problems, according to Dr. Delahanty, is that much of the literature on the subject deals exclusively with humans.

as the device to stimulate his animal patients. “I don’t twirl needles,” he explained. The generator has one to 22 volts and a frequency of one to 500 cycles per second. It’s “not too sophisticated,” Dr. Delahanty said. Indeed, with the lead wires and positive and negative electrodes, it looks like the instrument in your first chemical laboratory.

Dr. Delahanty is not always sure which is the optimal stimulation — a slow pulse, which will increase the activity of that part of the animal’s body, or a fast pulse, which has a sedative effect. “As a rule, if the animal is accepting the treatment well, it will have a tranquilized look.”

Why does Dr. Delahanty think acupuncture is successful? “It stimulates changes in the nerve impulses which can alter functions through the neurological system.” But there are still too many variables to have any definite answers.

A model horse, made of plastic in Taiwan, has the acupuncture points marked out. It serves as a “map” for Dr. Delahanty, indicating where the needles should be inserted. Dr. Delahanty uses sterile, hollow hypodermic needles that are made of stainless steel and are two-and-a-half inches long.

“They’re more useful and more economical than the acupuncture needles,” which are long and thin. However, the hypodermic needles are so “sharp they may possibly damage muscle tissue.” Every precaution is taken, Dr. Delahanty said.

If he hits the acupuncture point “right on,” the animal feels no pain. One method leaves the needles in the animal for 24 hours or more. Finding the correct pattern “is a matter of intuition,” Dr. Delahanty said.

These are the acupuncturist’s “tools of the trade.” The two top needles are used in veterinary medicine. The thinner needle is for treating humans.
Dr. Delahanty reports that he is reasonably pleased with the outcome of his acupuncture cases. He treats problems of arthritis, chronic pain, and long gastrointestinal difficulties in such domestic animals as cows and horses.

An electronic sensory probe is used to find the correct puncture point. Here Dr. Delahanty tests the device on his own hand.

A pony accepts acupuncture treatment from Dr. Delahanty. A local anesthetic was used to calm the animal before the treatment was started.

Delahanty has been receiving his "garbage cases" by word-of-mouth recently. Previously a horse had responded to one treatment after Dr. Delahanty "needled him in the neck." A newer case, a racehorse with chronic diarrhea brought especially to Dr. Delahanty from Kentucky, has "not been turning around quickly," although the veterinarian has tried various points for acupuncture.

Both dairy cattle and racehorses can be treated. But though acupuncture can cure, it can also cause pain, Dr. Delahanty pointed out. He said this aspect of the medicine raises implications for "upsetting the system" of racehorses.

A man recently brought Dr. Delahanty his newest case, a bull with a torn shoulder that has been "needled four or five times." Acupuncture was tried because the man's wife had received successful acupuncture herself in Washington, D.C. Dr. Delahanty said the technique of acupuncture is the same for humans as animals, though modified by the different thicknesses of skin. The bull also responded successfully to treatment.

Veterinarians are knocking out the M.D. fallacy that acupuncture is an oriental hypnotic effect like power of suggestion," Dr. Delahanty said.

Dr. Delahanty, who wants to study acupuncture in China within the next year, complained of a lack of communication between Oriental and Western practitioners of the art of acupuncture. Even among the "few scattered groups in this country," which became organized in the late 1960's, there is little effective sharing of research, he said.

Dr. Delahanty would eventually like to write an article on his research for the Cornell Veterinarian. In the meantime he intends to continue working on cases, keeping records, compiling observations and information. If he had the necessary hours and funds, he would devote more energy to acupuncture study. As it is now, he alone does the treatments, after his day at the clinic. It's a shame the animals can't tell Delahanty what he's doing wrong — or right.
Social Sciences...  

Human Needs Important Research Area  
by LYNN DICKEY, GRAD

If you assume that research conducted within the College of Agriculture and Life Sciences is confined only to such studies as the analysis of the strength of eggshells, the disposal and utilization of dairy manure, or the physiology of the alfalfa weevil, you are not aware of this institute's full dimensions. For a proportionate amount of research within the departments, sections, or units of the College is sponsored by behavioral and social science departments. These include the Departments of Communication Arts, Education, Rural Sociology, Agricultural Economics, and areas within the Department of Natural Resources.

Approximately seventeen percent of the total 563 research projects underway during the year ending June 30, 1974, dealt with social problems emphasizing the improvement of living and social conditions in rural areas, the protection of consumer health and nutritional well-being, and further development of knowledge, information, and education in related areas.

The emphasis on specific research areas supported by the behavioral and social science departments is indicated by the broad number of project topics. The Department of Education sponsored twenty-six projects during the 1973 academic year which included such diverse topics as elementary schooling and the political socialization of children; teacher expectations and reading achievement; the relationship of bureaucracy to student protest and alienation; interview training models for professionals and students; and a study of new students' needs and perceptions in an undergraduate college.

A project initiated in the Department of Communication Arts dealt with how to communicate with low-income people. Research areas in the Department of Agricultural Economics included an investigation of employment and welfare in developing countries; the rise and stabilization of human populations; and community services for nonmetropolitan people in the Northeast.

The 24 projects conducted through the Department of Rural Sociology included decision making processes in farm families; social service delivery systems for seasonal agricultural workers; community structure and the aging; and the relationship of rural dominance and social change. Of the 25 research projects sponsored by the Department of Natural Resources, three with a social science emphasis included an economic analysis of the camping market in the Northeast; factors influencing fisherman and hunter participation; and snowmobiling impacts and resource development.

Research project proposals may be submitted by any professor in a department. All University research proposals must then undergo a five step review process. Projects are usually generated by a professor. If a student has an idea for a project he must consult and develop it with a professor. The professor signs a proposal and sends it to his department chairman for further approval and a confirming signature. The professor within the College of Agriculture and Life Sciences must then summit his research proposal to the College’s research office.

All research projects are reviewed by Dr. Noland VanDemark, director of research for the College of Agriculture and Life Sciences. If the research project pertains to the social or behavioral sciences it must also be reviewed by Dr. Joan Roos Egner, acting associate director of research at the College, and acting associate director of the Cornell University Agricultural Experiment Station.

Dr. Egner describes the research office as “a facilitating organization to help the professor achieve the goal of a particular research project.” The review process acts as a safeguard to ensure that the project initiator has structured the proposal according to the appropriate procedure in order to acquire the support of a funding agency. The research office checks to make sure that the proposal is consistent with the policy form used by the funding agencies. The project proposal must also conform to federal regulations and University research policies concerning research on human subjects. Safeguards must be incorporated into the project to insure that individuals participating in the study will be completely informed and protected.

The proposal is then sent to the Cornell University Office of Academic Funding for further review before it is finally referred to a funding agency. The function of the review process is thus to facilitate the proposal's acceptance. The funding agency ultimately determines whether the research will be supported or not.

In addition to its role as project review processor, the research office of the College helps to target project proposals to appropriate funding agencies which sponsor research in specific interest areas. Occasionally a funding agency will submit a Request For Proposal (RFP) to the Director of Research stating that it would like to support a particular research project. The agency invites people to submit project proposals in a specific area. The College Research Office thus functions as a go-between organization which directs individuals who might

(Continued on page 17)
Sunshine in any season is a rather scarce commodity around the Cornell campus and the Ithaca region. No wonder it is a fairly common source of conversation among those who live here and who occasionally visit these parts. Sunshine talk is topical for students crossing the campus, faculty out for a noontime walk, and parents here for the day or staying the weekend. Hardly anyone fails to notice that the Ithaca bowl is not sunshine valley.

So, small wonder that when the sun does shine — for whatever reason or however brief a period of time — there is universal cause to rejoice. Those rare times when the sky is bright and clear usually bring a measurable change in the way people behave. Spirits are optimistic, attitudes are positive, courtesies exceed normal expectations.

The pattern is especially noticeable during winter periods when strong rays of sunlight open the day, remain intense throughout the morning and afternoon, and eventually slip into dusk.

Such days, wrote New York State's farm-reared, poet-naturalist John Burroughs, provide "a spur that one feels at this season more than at any other. How nimbly you step forth! The woods roar, the waters shine, and the hills look invitingly near. You do not miss the flowers and the songsters, or wish the trees or the fields any different, or the heavens any nearer."

Winter Sunshine
The view from the top of the College's Bradfield Tower emphasizes the massive, dynamic system of the atmospheric environment and the challenges this environment offers in the fields of atmospheric forecasting and research.

In its appropriate location, the College of Agriculture and Life Science's Division of Atmospheric Sciences is to many New Yorkers an essential resource in acquiring information on day-to-day weather forecasts and on broader climatological conditions. The continuous influx of data from the National Oceanic and Atmospheric Administration (NOAA), via teletype, supplies the department with weather patterns of the entire country. The department, classified as a climatological station, collects its own weather data once a day. In conjunction with the Atmospheric Science division's five weather stations in New York State, the division is able to compile weekly and monthly weather summaries which include computerized weather maps. These summaries are distributed to a wide range of people throughout the state. Such information is sought by farmers to help them determine the best time to plant and harvest crops, by architects who wish to use construction materials most suitable to the climatic conditions, and by skiers searching for perfect snow conditions.

The division has increased its function as a climatological station with the appointment of A. Boyd Pack as Professor of Climatology. Prof. Pack, the former New York State Climatologist, is concerned with analyzing and interpreting weather conditions over a time span of many years. From this information, the averages and extremes of temperature, precipitation, and other weather phenomena are recorded. The division of Atmospheric Sciences is the only source of such valuable climatic records in New York State.

In attempting to more clearly understand the complex nature of the atmosphere and its tremendous effects on the environment, the division of Atmospheric Sciences is currently engaged with a number of exciting research projects. Two such projects involve the study of severe local storms by Dr. Douglas A. Paine and the effects of weather upon vegetation being researched by Prof. B. E. Dethier.

The catastrophic effects of sudden tornadoes and other severe local storms have been a weather phenomena of great concern to many people. The need for immediate predictions and warnings of these tremendously powerful weather occurrences is evident when acknowledging the hazards they present to life and property of the threatened communities. Past difficulties in early predictions of these severe local storms or "micro systems" are due to both their smallness in size and short life span as compared to larger weather movements or "macro systems." The dynamics of the atmospheric environment as a whole system, and the close link between small scale disturbances as local storms and larger atmospheric activity also hinder their early detection.

The more reliable and earlier predictions of unusual weather extremes in winds and precipitation is currently being researched by Dr. Douglas A. Paine, sponsored by the National Science Foundation. Dr. Paine, working in conjunction with the Air Force Global Weather Center in Omaha, Nebraska, is in the process of testing a numerical computer model used to predict severe storms as tornadoes and snow squalls. In the past, such numerical models have only been used to predict large scale movements in the atmosphere which range from 1,000 to 10,000 kilometers, while a tornado is usually less than one kilometer in diameter. Because the micro systems are outbreaks of larger systems from which they receive their energy, Dr. Paine's work requires the entire weather service data network over all of North America. Through the computer model, Dr. Paine can predict what small scale conditions will occur in the next 24 to 48 hours over a given area. The model, which has undergone testing in the past three years, has been specifically successful in predicting the flood-producing rains of hurricane Agnes, which occurred in June 1972 over the Eastern United States.

According to Dr. Paine, "If the test runs continue to be successful, then computer predictions of severe local storms may eventually aid forecasters in preparing early warnings of the types of heavy wind, snow and rain which have plagued man for centuries."

The effects of the atmospheric environment upon crops and natural vegetation across the United States are being studied by B. E. Dethier, Professor of Meteorology in the division of Atmospheric Sciences. The study, started in 1972, has used a year and a half of data collected from the Earth Resource Technology Satellite (ERTS). The ERTS data consists of weather conditions occurring on meso or middle scale level which is county or state size to macro scale which is global size. This information is interpreted to predict changes in vegetative stages of plants which are dependent upon changes in weather and seasonal variations.

Phenology is the branch of science dealing with the
relationship between plants and weather phenomena. Phenological data on specific indicator plants in the East and West are being collected and analyzed to determine the impact of weather on crops and crop yields. In the Western United States, field observations are being made on the natural vegetation of range lands and on such cultivated crops as alfalfa and wheat. On the Eastern Coast, the natural vegetation of deciduous forests are primarily being observed.

In closely monitoring the relationships between changes in the physical environment and changes in a specific indicator plant, Prof. Dethier is forming a model in which changes of other crop yields can be predicted.

The day-to-day weather conditions, which to a great degree dictate our life style, are only small manifestations of the tremendous energy transfers and eruptions which occur in the atmospheric environment. The many attempts to control or alter this energy flow as in the seeding of clouds to activate the precipitation process, have had little success. These approaches to atmospheric control have viewed weather as distinct events instead of a part of the dynamic functions of the ocean of air. The belief that much is still unknown about the nature of the atmosphere has lead to new approaches in experimentation. One exciting future speculation is the possibility that man, in working with the system of air, will be able to tap some of its localized energy, as concentrated in storm activity, and harness it as an alternative energy source.
Geneva Station . . .

Researchers Improve Food Supply

by MARK S. SMITH '76

During 1975 agricultural experiment stations across the country will be celebrating the centennial of the experiment station concept. For the New York State Agricultural Experiment Station at Geneva, things have changed a lot since its founding in 1882. It was then the seventh center in the country specifically to be set aside for agriculture. Today it has grown to 650 acres, become a division of the Statutory College of Agriculture and Life Sciences at Cornell, and sprouted satellite facilities in Fredonia and Highland, New York.

But though the way research is conducted progresses swiftly from year to year, Geneva experimenters find they're working on many of the same problems which faced farmers a century ago.

A report written by the Station in 1882 said "apple scab" was "the most devastating disease" then affecting fruit farmers of New York State. And yet, that same description could fairly be applied to today's situation. The "apple scab" viral infection, if left uncontrolled, will wipe out 100 percent of an apple crop in any given orchard. Luckily its incidence is being controlled - largely with two sprayed chemicals developed by the Geneva Station, captan and docine.

But why is "apple scab" still a problem? For two reasons. First, it takes a long time to grow an apple tree. If an experimenter thinks he has developed a resistant apple plant, he is forced to wait 10 years before a seed he plants will fruit. In addition, some strains of "apple scab" virus have developed a resistance to the chemical agents used against them.

"Apple scab" is far from the only problem the state experimenters at Geneva are still working on after a century. Other areas of research include control of the ravenous Japanese beetle, improvements in plant resistance to frost, better cultivating practices, and more efficient use of fertilizers.

The scientists at Geneva have traditionally concentrated on the fruit and vegetable end of the agricultural spectrum. The Station's prestigious Pomology and Viticulture division names its two hundred and first variety this fall - a landmark achievement, particularly when one considers that it usually takes three or four generations of a fruit tree (at 10 years per generation) before a specific breed is ready to be named.

Over the years, the Geneva Station has developed such familiar apples as Cortland, Empire, Lodi, Monroe, Early McIntosh, and Wayne. It developed the Stanley plum, probably the most abundant commercial variety today. And it just recently introduced a new grape variety, Cayuga White, which some say will revolutionize the production of New York wines.

Experiment stations in general have been feeling some criticism over the past few years for this close concern with the needs of the agribusiness world. But Geneva's publications editor R.E. Krauss doesn't see that attitude as necessarily a bad thing.

Experiment Stations have long been centers of learning for consumers. Shown here is part of the large crowd that gathered for an open house at the New York State Agricultural Experiment Station at Geneva in 1908. Presently, about 10,000 visitors tour the Station's facilities each year.
The grape and wine industry is one of the fastest growing segments of New York agriculture. A primary reason for this growth is the result of an expanded grape and wine research program. The mechanical grape harvester is one of several major breakthroughs in this area of research.

"Under no circumstances," he said, "do we want the industry to dictate to us. But our strong concern is that these firms should be helped by what we do. Our work benefits the entire state economy." The grape and wine industry has been the fastest growing in New York State since 1969, largely a result of the many new strains of grapes developed by the Geneva Station.

The state experimenters are also working at present on a variety of tomato which may bring that crop back into New York. In recent years, the tomato has gone west. Farmers in New York have been unable to compete with the longer growing season in California. But researchers in Geneva say they're close to developing a strain of frost-resistant tomatoes which will effectively lengthen the available growing time here.

But as the Geneva Experiment Station moves into its own second century, there is at least one major new area of inquiry. Two Geneva scientists in particular are attacking head-on the problem of world dietary insufficiency. Probably the most pressing world need is for more protein. Unfortunately, the commonly accepted means of producing protein—livestock, poultry, and dairy operations—are highly inefficient in converting raw materials to food. So these scientists have struck at the problem from a different, if unorthodox angle.

Microbiologist Dr. Yong D. Hang has done a study on the possibility of using yeasts to help reduce the waste disposal problem facing the sauerkraut industry (Phelps, N.Y., a suburb of Geneva, calls itself the sauerkraut capital of the world). Hang says the introduction of yeast will reduce the amount of nitrogen and phosphate pollutants by nearly 90 percent. The yeasts also reduce acidity significantly. But at the same time, the microorganisms encouraged by this process have great food value. They are about 45 percent protein and are rich in B vitamins.

Another microbiologist, Dr. Keith H. Steinkraus, is working with fermented foods which have been produced by native populations for hundreds of years. These include an Indonesian soybean product called "tempeh" and a gram dahl and rice mixture made in India called "Idli". Dr. Steinkraus feels it will be "increasingly necessary" to produce such microbial protein foods in the future. As part of his work he has developed a technique to reduce fermentation time from the usual seven to fourteen days down to six hours.

Dr. Steinkraus estimates that a fermentor charged with a thousand pounds of cells could produce twelve thousand pounds of protein per day. Dr. Hang estimates that a fermentor covering one half square mile could provide a ten percent supplement to the world food supply.

Work such as that being done by Steinkraus and Hang could be the key to the Geneva Experiment Station's second century. It is this type of research and the work of those who pioneered before that assure the success of the New York State Agricultural Experiment Station at Geneva and the Cornell University Agricultural Experiment Station at Ithaca as vital and growing forces in New York State and world agriculture.

Dr. Keith H. Steinkraus, right, talks to a group of students interested in work that is being done at the Geneva agricultural experiment station to improve world food conditions. The product being tested by the students is tempeh, an Indonesian food made from soybeans.
Dr. Yong Hang, second from left, seeks ways to minimize agricultural wastes. His work with yeast cells points to methods for reducing pollutants in the processing of sauerkraut.

An airblast sprayer is used to treat commercial apple orchards against apple scab, the most devastating disease affecting this leading fruit crop in New York State. Research has been underway for several years at the Geneva Station to find new varieties of apple resistant to scab and other damaging diseases and insects.

Main campus of the New York State Agricultural Experiment Station at Geneva, including some of the adjoining orchard areas. Total size of the campus at Geneva is 650 acres. There are also two outlying substations, one in the Hudson Valley at Highland and another at Fredonia west of Buffalo.
be interested in a specific project to contact the sponsoring agency.

Supporting funds for research come from federal, state, and college sources, special grants and gifts from foundations, and private agencies and individuals. One financial source is through the Hatch funds. Hatch funds consist of money which is appropriated through the United States Department of Agriculture to Land-Grant Universities explicitly for research purposes. Each College receives a specified sum. Individual departments submit budget requests to the College, and a specific amount of money is in turn allocated for research to each department. After a Hatch research proposal has been processed by the College, it is sent to Washington, D.C. to be reviewed and approved by the Cooperative State Research Service (CSRS). Then the project is coded in the research classification system so that previous research topics are accessible to other researchers throughout the country.

A small amount of money is available for research through College funds. These limited funds are primarily used for small projects or as a catalyst to stimulate further research. A professor may obtain money to cover the initial research costs or partial coverage of a project until he is able to secure more money from other sources.

Special gifts and temporary grants are also given to the College for research purposes. Some of the 1972-1973 contributors which have allocated funds for the social science areas include the Board of Regents of the State of New York, Alfred P. Sloan Foundation, New York State Education Department, and the Rockefeller Foundation.

Researchers working on projects in the social and behavioral sciences have contributed greatly to the goal of strengthening and developing scientific information in the area of human relations, education, and social development. Further emphasis on basic and applied research in the social sciences will continue to significantly contribute to effective teaching and further research with implications for social change both within Cornell University and society.

Laboratory Mums Aid Plant Production

College of Agriculture and Life Sciences researchers are growing chrysanthemum plants in the laboratory by culturing plant cells taken from the growing tip of a plant.

They have successfully produced hundreds of mature plants, all identical with the parent plant. The method is described as meristem tissue culture.

Prof. Robert W. Langhans says that the method has potential for producing mums on a massive scale.

Mrs. Elizabeth D. Earle, research associate, who works with Langhans, calculates that a single slice of the growing tip (meristem) is capable of producing as many as 900 billion plants within a year.

"The potential of this system's rate of plant production is really spectacular," Langhans said.

Since meristem cells continue to multiply rapidly under laboratory conditions, it is possible to produce plants almost limitlessly.

The size of a meristem slice with thousands of embryonic cells is as small as a pinhead. These cells develop into small plants, about an inch tall, in three to four months. In about two more months, these plants become six-inches tall -- ready for flower production.

For all practical purposes, plant production by this method can be tailored to desired numbers by controlling tissue material at certain stages of the laboratory operation.

So far, the researchers have produced about 1000 full-grown plants of three varieties, and these test-tube mums are indistinguishable from ordinary plants.

Mrs. Earle said that the flowers and the time it takes for them to bloom also are normal, without any genetic changes.

The idea of producing whole plants from meristem cells has been used with success in recent years in the orchid industry, but the technique has not been used for other flower crops.

"We now know this system works well on chrysanthemums, and the same principle should work for many other crops," Langhans noted.

Mrs. Elizabeth D. Earle, College research associate, checks a flask containing clumps of meristem culture material that can develop into numerous chrysanthemum plants under laboratory conditions.
price relationships are making it impossible to continue to produce food without raising prices. Prices for many items have doubled, quadrupled or increased even more. It is unreasonable to think that food should be an exception to this change in our economy. Much of the increase in costs of food has come about as a result of the demands of the consumer for processing and packaging food and the labor involved in distributing food. Research efforts do need to be continued to expand food production and to become more efficient in producing food, but we also need research into the marketing aspects involved as well.

Countryman: But is agricultural research presently sufficiently supplied with the proper kind of direction and resources necessary to do this important job?

VanDemark: Yes, we are well geared to looking at not only the production aspects in agriculture but also in looking at the marketing aspects as well as the social implications of the developments that have come. We are constantly faced with problems arising in new areas and many times we need additional resources to deal with the new problems. However, we are constantly adjusting our scientific personnel so that we can respond to those important needs.

Countryman: Many times it has been said that research is the backbone of a strong, vigorous, and productive agriculture. Assuming this is the case, what is being done at the present time—in view of the current economic picture—to assure the public that the College’s research component will remain active, alive, and well in the future?

VanDemark: We are stepping up our efforts to keep the public informed of the activities we are involved in and hope that we can help them to understand the importance of the research component as well as the teaching, extension, and international aspects of our College activities. We are constantly reviewing our priorities in an attempt to be responsive to those areas where the greatest needs exist. We are attempting to phase out those parts of our program where problems have been solved. We then attempt to realign our scientific personnel to the new needs. We are exerting considerable effort to recruit to our faculty and other scientific personnel positions, imaginative, creative and promising young individuals with the best possible kind of background and training, yet with an understanding of the real problems of the world. We are making special efforts to raise money from foundations, agencies and industry to supplement the funds we receive from state and federal tax sources in order to be able to respond to the many and varied needs which come to our attention.

Countryman: Considering this magazine’s readership (primarily alumni, students, and faculty), what message or special emphasis would you like to leave with this audience regarding the scope and future direction of the College’s research activities?

VanDemark: We must remain open-minded and alert to the ever-changing needs of agriculture and the related fields and the consumer as well. We must remain flexible and be willing to make the hard decisions for change which are bound to come. We need the moral as well as the financial support and the understanding of the alumni, students, faculty and the wide array of clientele who look to the University for leadership. If we can continue to face our problems head-on with creative, imaginative and realistic approaches with a genuine concern for the well-being of mankind, then collectively through research, teaching, extension and international development we should be able to better cope with the world’s future problems.
Robert L. Thompson '67, recently completed his Ph.D. at Purdue University, and he is now on the faculty of that institution in the Department of Agricultural Economics, specializing in the area of international trade. Research for his thesis was conducted in Brazil where he was also Visiting Professor at the Universidade Federal de Vicosa.

Llewellyn Turner '22, now retired from teaching in the Port Chester High School and living in Schoharie, N.Y., reports that he is active in a number of civic and social organizations. Last July he was a delegate from Schoharie County to the American Legion Convention at Niagara Falls.

Robert E. Zautner '27, has retired from his Toll Gate Ice Cream business in Slingerland, but he continues to serve as president of Zautner Real Estate, Inc. He spends his winters in the South and summers in New Hampshire. Claims he is "resting up" for his 50th Class Reunion in 1977.

Willett R. Porter, Jr. '48, has been serving as pastor of the United Methodist Church of Mount Kisco, N.Y. for the past two years. During the previous 22 years Rev. Porter has served in parishes in New Paltz and Valley Stream.

Ray Bender '26, retired as agricultural agent for Cooperative Extension in Essex County, N.Y. since 1962, keeps active in community affairs from his home in Westport. He is a member of the Essex County Alcoholic Beverage Control Board and the Essex County Soil and Water Conservation Association. Also, he is a part-time staff correspondent and columnist for the Press-Republican, published daily in Plattsburgh.

Donald G. Robinson, Sr. '41 retired from teaching agriculture in Wyoming County, N.Y. last June. His wife, Thelma, also retired as a teacher of home economics. The Robinsons make their home in Castle, N.Y. and they are active in civic, church, and community affairs. They plan a trip through the South this winter.

Melinda L. Everitt '61, reports that her parents, Robert H. '34 and Doris M. '33, spend their winters in Florida and summers in the 1000 Islands. Melinda, who lives in Schenectady, works out of Albany for the Department of Correctional Service. She also reports that she is president of the Local Cornell Women's Club.

Herrell DeGraff '37 (Ph.D. '41) of Brooktondale, N.Y. has been named the first recipient of the Distinguished Service to Agriculture Award by the American Society of Farm Managers and Rural Appraisers. The award is for promoting understanding and goodwill between producers and consumers of agricultural products. Dr. DeGraff retired from the American Meat Institute in 1973. He served as professor of land economics in the College from 1941 to 1951, then became the H. E. Babcock Professor of Food Science in Cornell's Graduate School of Nutrition, and he left this post in 1962 to join the American Meat Institute in Chicago.

Cornell Senate Elections Feb. 18-19

The Cornell University Senate Elections will be held by mail this year. Off-campus student ballots will be sent by U.S. mail on February 13; on-campus students, faculty and employees will be sent by campus mail on February 14. Completed ballots should be placed in strategically located ballot boxes on campus on February 18 and 19. These boxes will be located near mailrooms, dining areas, in libraries, etc. Please do not return your ballots by campus or U.S. mail.

As in the past, students will vote for their Senators and a student and faculty member of the University Board of Trustees. For the first time, employees will vote not only for their Senators, but for an employee to represent them on the University Board of Trustees. Such important referendum issues as the Academic Calendar, the Phy. Ed. Requirement, and the Bill of Rights will be included in this election.

Ag Leaders' Forum Set For Mar. 19-27

The College's Agricultural Leaders' Forum will be held from March 19 to 27 at five locations across New York State, as follows:

March 19 – Fireman's Recreation Center at Alexander; March 20 – New York State Grange Headquarters at Cortland; March 24 – The Holiday Inn at Newburgh; March 26 – SUNY Agricultural and Technical College at Canton; and March 27 – SUNY Agricultural and Technical College at Cobleskill.

The program's theme is "The World, the Nation, and the Farm." Registration starts at 10:00 a.m., and the program time is 10:30 a.m. to 3:30 p.m. at each location.

PICTURE CREDITS

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It is widely recognized that America's agricultural productivity rests on a foundation of research. It is a foundation that dates back to the establishment of the country's first agricultural experiment station at Middle-town, Connecticut, in 1875. The person most responsible for this important event was Samuel William Johnson, a New Yorker from Gloversville who has become known as the “father of scientific agriculture in America and of the movement for agricultural experiment stations in this country.”

Since Johnson’s day, numerous behind-the-scenes scientists in a variety of fields have been dedicating their time and energies to the quest for the new knowledge and improved technology that will guarantee abundant, wholesome, and reasonably-priced food for every citizen. In the forefront of this movement are the Cornell University Agricultural Experiment Station at Ithaca and the New York State Agricultural Experiment Station at Geneva. Both have long provided outstanding leadership for the state's agricultural industry, a record of public service that continues to meet the challenge of change.

New York State College of Agriculture and Life Sciences, a Statutory College of the State University at Cornell University.
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Upgrading the Countryside...

A Look At Rural Living

by JOANN KICHTON '75

Rural America is in trouble. For many years people have been evacuating the countryside to seek new opportunities in over-populated, polluted cities. Seventy percent of the American population now lives on only two percent of the land and the United States Department of Agriculture states that “Rural America, with about one-third of the Nation’s population, has nearly one-half of its poor housing and nearly one-half of its poverty.” Since 1970 the country to city migration trend has begun to reverse but the quality of life in rural America must be improved if this reversal is to continue. This is one goal of the Northeast Regional Center for Rural Development.

The small office on the second floor of Roberts Hall serves the needs of twelve states: New York, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, Pennsylvania, Rhode Island, New Jersey, Vermont, and West Virginia. The Center acts as a training, advisory, and coordinating unit for the northeast region. Dr. Olaf Larson, director of the Center, explains that it does not undertake research because, “As a regional center we should not do anything which the states are in a position to do. We would undertake research only if the states didn’t have the staff competence to do the research on that particular problem or wasn’t able to undertake something that was needed rather urgently.”

While the Center does not actively engage in research, it does have the job of identifying research needs and recommending priorities. The first step towards this goal was to take an inventory of research already in progress. Information made available by key people in various states enabled the Center to determine areas defined as rural development research, the types of programs in progress, where these projects are located, and the staffs involved. At the time of the inventory, 133 rural development projects were under way in the state agricultural experiment station.

Together with the inventory and a report produced by the Task Force on Rural Development Research (the report identified eight high priority rural development needs), Title V of the Rural Development Act of 1972 lays the groundwork for the “collection, interpretation, and dissemination of useful information and knowledge from research” to assist rural communities. Dispersing new knowledge is the teaching function of the Center and to fulfill this obligation, it sponsors conferences and workshops on problems in rural development.

For example, one conference dealt with the problem of controlled and balanced growth. Its purpose was to assist extension staff members in determining the effects economic development proposals would have on a particular community. The staff members would apply information obtained from the workshop to help local
A major goal of the Center is to allow research users to help investigators define the information required to best serve the needs of rural communities.

decision makers judge the effects a proposed factory, shopping center, or housing project would have on their community. Larson notes the importance of considering “the whole range of impacts — economic, fiscal, social, political, ecological — which a community and its decision makers should be aware of when they’re faced with a choice about trying to attract or keep out a proposal which bears on the economic growth of that community.”

Another conference centered on various means of rural land use controls in operation or being proposed. “A lot of people think zoning is the only way to control land use,” observes Larson, “and in fact there are many other alternatives including assessment policies, use of public trusts, agricultural districts, and conservation commission activities at the local level.” At this conference Extension workers acquired knowledge about different techniques for land use control which they could use in their work to help with local decision-making processes.

All these activities are aimed at making rural research serve rural needs. Soon the Center will try a new approach to the rural development research program. Larson states that a major goal of the Center is to allow research users to help investigators define the information required to best serve the needs of rural communities. To provide the opportunity for this necessary interaction, committees of researchers and research users will be established. The first committee on community services will determine the priorities in this area and then recommend a five-year research program. “This provides a basis for allocating resources to support research,” explains Larson. “It becomes a basis for making recommendations as to whether the research can be most effectively accomplished on a regional basis, in an individual state, or in some other way.”

The Northeast Regional Center for Rural Development fulfills the need to channel new research findings directly to those who require the information in their work with rural communities. Research programs will be ineffective if findings are not made available so they can aid people in rural areas. Furthermore, researchers and research users must work together to identify the problem areas in which scientific study is most urgently needed. The Center provides a link between these two groups and in doing so, plays an important role in the revival of rural America.
Hiking the rigorous slopes of the Cornell campus may seem to warrant a candy bar break for many students enroute to class, but two alternative approaches to exercise and nutrition are currently available at Cornell. A new health and physical education course and a nutritionally based dining program were initiated recently for students interested in learning about and achieving optimum personal health.

The course entitled “Components of Physical Fitness” was developed in response to a recommendation from the University Senate that a health education course be developed as an optional alternative to the men’s and women’s physical education classes. An innovative course resulted in cooperation with the teaching staffs of the Health Services, the Department of Physical Education and Athletics, the School of Human Nutrition, and a faculty member of the Department of Physical Education at Ithaca College. Robert J. Kane, dean of Physical Education and Athletics at Cornell and one of the leading figures in devising the course curriculum, has described the program as unique among course offerings at other universities in its multi-departmental approach to the subject of health education.

This article reports on a new health education course titled, “Components of Physical Fitness,” developed as an alternative to the student’s traditional participation in physical education classes.

The content of the course focuses on the areas of preventive medical care, nutrition, and exercise research. The format of the course combines lectures and class discussions with actual participation in an exercise research laboratory. The coeducational class is open to sixty students in both the undergraduate and graduate divisions, and fulfills the physical education requirement for one term. The class meets twice a week on Tuesdays and Fridays at 3:30 in Barton Hall.

Doctor Ralph Alexander, a member of the Cornell Health Services, conducts lectures on medical topics of health care such as preventive medicine, public health information, drug abuse, human sexuality, and population planning.
“The focus is on teaching people to develop sensible approaches to eating patterns that they
can follow for the rest of their lives that are both enjoyable and reasonable.”

Four lectures emphasizing the nutritional aspects of preventive medicine are presented by Doctor Daphne Roe, a member of both the medical staff and the teaching staff of the Division of Nutritional Sciences, and by Mary Morrison, a professor of human nutrition and food. Modern concepts of foods and their nutritional content, reasons for following a balanced varied diet, and a recent research study of the dietary patterns of a group of Cornell students are discussed. The implications of special dietary regimes for athletic training programs are explored in correlation with the exercise research component of the course.

Each student participates in an individualized exercise program supervised by Edward J. Burke, assistant professor of Physical Education at Ithaca College. Mr. Burke's approach to the program is that “although not everyone can be an athlete, everyone can be physically fit.” A testing program to establish parameters for determining components of physical fitness is conducted. A series of pre-tests are administered at the beginning of the course to assess the student's initial state of physical fitness.

A program of stretching exercises and jogging are prescribed at each class meeting. Individual records are kept to determine physiological changes in respiration and pulse rate which occur as the student reaches aerobic capacity and increases optimum physical stamina. The exercise laboratory program is also supplemented with lectures on human anatomy and exercise physiology, and the influence of exercise on heart disease and other related illnesses. A final physical fitness exam is conducted at the completion of the twelve-week course to determine the effects of the exercise program.

Dean Kane explained that the course is still in an experimental stage, and that student evaluations throughout the course as well as evaluation by faculty participants will be considered to determine possible alteration or expansion of the course curriculum in the future.

To keep up with the calisthenics, the University has also created a new nutritional dining program under the direction of Arthur E. Jaeger, director of the Department of Dining. Steamed clams, red snapper l'orange, London broil, glazed acorn squash, corn on the cob, strawberries with kirsch, and peaches and cream are just a few of the tempting selections available to members of Co-op 2000, the innovative nutritional meal plan served in the Balch Hall dining room at North Campus.

The program is designed to make diners aware of their nutritional needs. Mrs. Kelani Woodruf, the executive dietician for Co-op 2000, stated that “the intention of the program is to increase people's enjoyment of food, and to enable them to appreciate the texture and quality of good, wholesome food. The focus is on teaching people to develop sensible approaches to eating patterns that they can follow for the rest of their lives that are both enjoyable and reasonable.”

This has not been the typical eating pattern of the U.S. population and particularly not that of students whose pressurized lifestyles often create a vending machine mentality towards quick, fast food meals which, although readily accessible, are not likely to be high in nutrient value.
Co-op 2000 is not a crash or fad diet. The focus of the meal plan is on the basic nutrient content of foods rather than on maintenance of a specific calorie level. It is designed for diners interested in good food who cannot afford to eat nutritionally empty caloric foods and snacks in addition to a balanced diet. Meals are planned with an emphasis on lean meats, poultry, fish and eggs. Starchy foods, heavily sweetened desserts and snacks such as potato chips and cokes are replaced with fresh fruits and vegetables. Diners have a choice of two entrees, vegetables, salads and fruits to select from at each meal. Every lunch includes a soup du jour with wheat bread and rolls.

The plan includes ten meals a week, lunch and dinner, offered Monday through Friday. Eventually breakfast may be added as another meal option. Unlimited second servings are available at each meal. Special menus are offered each Wednesday night and special occasion meals are highlighted each month when diners can splurge on their slightly more caloric favorites. Anticipated special evening events in the fall include a fashion show and a harvest celebration meal.

The elegant atmosphere of the Balch dining room is considerably different from that of other dining halls, and contributes to the program’s theme of eating as a pleasurable, relaxed experience. Hanging plants and attractive pictures decorate the spacious, carpeted dining room. Linen tablecloths, crystal goblets, and red and blue painted china add to the setting of casual elegance, and a functional fireplace contributes a cheery warmth in the colder months. An extra dining room may be made available for expansion of the dining program. The turnover seating capacity of Co-op 2000 is 300 diners. Response to the program has been good, and the membership currently includes over 180 men and women.

The dining program is open to any member of the Cornell community. The cost of Co-op 2000 corresponds to the regular Co-op plan which is $300 per semester with an additional annual membership fee of $60. Members of the regular Co-op may permanently switch into the 2000 program if they wish. Guest passes may be purchased for individual meals and are priced at $2 for lunch, and $2.90 for dinner. The price of a special night dinner is $4 for nonmembers.

In addition to planning meals and organizing the Co-op 2000, Mrs. Woodruff is available for individual diet and nutrition counseling in her office in Balch Hall. Eventually a class may be implemented in coordination with the Balch dining program on nutritional information.

To evaluate response to this new approach to nutritional meal planning, informal meetings will be held with the Co-op 2000 members to assess what students like and dislike about the program. So far the reaction of the diners has been overwhelmingly enthusiastic. After all, who can argue with healthy eating and delicious meals, and maybe even a few lost pounds as well.

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Researchers Probe Speed Reading Skills

Prof. George W. McConkie of the College’s Department of Education adjusts the apparatus that hooks up David Zola, a graduate student in the department, to the machinery that probes what goes on in the head of a skilled reader.

The Cornell researchers hope to gain an understanding of the most advanced form of reading — rapid, silent reading. They will also test whether the claims made by speed reading advocates can actually be fulfilled.

They are particularly interested in determining the perceptual span of readers, and how the eye jumps or fixates from point to point on the page.

College students are currently the subjects for McConkie’s reading studies. But eventually he plans to expand his study group to determine the forces sending your eyes across this page.

These Cornell studies are supported, in part, by the National Institute of Mental Health and the National Institute of Education.
DeWitt Park: Buffalo and Cayuga Streets. Clustered around this familiar park are several of Ithaca's famous landmarks. These include (l. to r.) the Presbyterian Church, Old Tompkins County Courthouse, and Baptist Church. Boardman House, not shown, is to the right of the Baptist Church.

Boardman House: East Buffalo Street. Built in the 1800's, this structure served as the home of Judge Douglas Boardman, first dean of the Cornell Law School. In 1910 the house was purchased by the Ithaca Conservatory of Music, which later became Ithaca College with Boardman House as the center of its first campus. This structure, more than any other in the city, symbolizes Ithaca's attempts to preserve and restore its historic landmarks. While many buildings are now assured a long life, the fate of Boardman House has yet to be decided.
Endangered Ithaca

College alumni need only be reminded of Cornell or hear strains of “Davey” or the Alma Mater and immediately connotations of campus life and the Ithaca experience invade their minds. The region’s beautiful setting, a favorite building, falling leaves, or a walk through one of the many local parks are among remembered images of former days.

But usually when alumni return to Ithaca they are often surprised to discover that their quiet town is not always what it once was. This is particularly noticeable in the rise of new buildings and the fall of old ones. Many people will tell you that old buildings are an essential part of a locality’s heritage and that such structures should be preserved to provide future generations with a link to a community’s past. As is the case with older buildings in many towns and cities across the country, Ithaca’s early structures are becoming endangered architecture.

Fortunately, steps are being taken to stem the destruction and preserve historical buildings and memorabilia that reflect Ithaca’s heritage. In the forefront of this movement is Historic Ithaca, a group of private citizens from the city and Cornell who are dedicated to saving the area’s physical assets. They regard the buildings and landmarks as important to community interests — present and future — as the surrounding gorges, lakes, and waterfalls.

While alumni may not always find the Ithaca scene exactly as they left it, they are certain to find much of it intact if citizens working to preserve and enhance the city’s past have their way.

Clinton House: North Cayuga Street. Claimed to be the most impressive hotel between New York City and Buffalo when it was built in 1831, Clinton House is presently recognized as an outstanding architectural landmark. Purchased by Historic Ithaca in 1973, the former hotel is undergoing restoration. It now houses the DeWitt Historical Society.

Old Courthouse: East Court Street. This is the oldest public building in Tompkins County and the old Gothic Revival courthouse in New York State. It was designated a State Historic Landmark in 1971.
The building sits quietly, anonymously, and unimposing, surrounded by 180 acres of untouched forest. Motorists often zoom past it before they realize anything is there. Students living nearby lurk in the woods, peering at the rows of silent cages and pens in the field across the street.

All they need to do is stop inside and take a look. They'll find the Laboratory of Ornithology at Cornell is anything but mysterious.

Perched at the end of Sapsucker Woods Road about three miles northeast of campus, the lab, a one-story flat-roofed cement block building overlooking a ten-acre pond, serves as a multi-purpose international center for the study of birds and wildlife. The lab, along with the Lyman K. Stuart Observatory, is intended to promote the study, teaching, enjoyment, recording, and photography of birds in their natural habitats.

The complex was built to house the lab after it had spent 40 years as a separate entity, floating homeless in the administrative complex of the university. The ornithology department was conceived in 1915 when the late Prof. Arthur A. Allen carved a space for himself out of the College of Agriculture's Department of Entomology. It remained unofficial through its brief residence in two other departments before becoming independent in 1955.

Then Lyman K. Stuart, Cornell '21 and a former student of Dr. Allen, bought 130 acres of Sapsucker Woods for a lab. Neighbors and the university chipped in another 50. The New York State Conservation Department flooded ten acres of meadow to attract wild birds and the building opened in May 1957.

Most of the building is devoted to the observatory. The main room's west wall is a series of plate glass windows overlooking the pond. Carloads of parents and children, along with numerous senior citizens, invade the observatory each weekend to watch Belted Kingfishers, Ring-Billed Gulls, and common wild ducks cavort and feed outside.

Other wings of the building display ornithological paintings by Louis Agassiz Fuertes, perhaps the most revered artist of the bird world; a glass case containing 91 mounted iridescent hummingbirds; a fledgling collection of bird stamps; and offices for staff and grad students, a library, darkroom, and files.

The lab also houses 30,000 specimens of bird chirps and wildlife sounds, an outgrowth of Dr. Allen's pioneering efforts to record Mother Nature.

Tompkins County bird lovers can get the latest news by tuning in WHCU-FM for "Know Your Birds," prob-
Feather freaks can also subscribe to “The Living Bird,” the annual lab publication. It uses a Scientific American-type format to present papers on various aspects of ornithology. There’s also a quarterly newsletter that keeps avian addicts up to date on the bird beat.

The lab’s scientific research projects span the globe. Lab personnel on the Island of Mauritius in the Indian Ocean (famous for the now-extinct Dodo) recently attempted to save another endangered bird – the kestrel, a rare species of falcon.

Students in Alaska are studying birds of prey, sponsored by the lab. Across the street from the complex, grad students study wild wolves and coyotes.

The laboratory also operates the North American Nest Record Card Program which collects data from 1,000 observers who count the number of eggs laid and hatched per nest. This helps chart population trends and other environmental factors affecting birds.

Birds are not, of course, everyone’s most interesting consuming pastime. But the Laboratory of Ornithology does pride itself on helping the public appreciate nature’s gift to the skies.

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Moving Trays Aid Plant Growth

A new plant grower featuring moving plant trays is adding another dimension to indoor plant growing. Trays go around a battery of fluorescent tubes arranged in a vertical bank in the center of the planter.

The device is similar to many types of store display stands with built-in moving parts. Equipped with six plant trays, the planter measures about 6 feet tall, 4 feet wide and 2.5 feet deep.

It takes 18 minutes for all the trays to make a trip around the lights. The result is a continuous parade of ornamental plants with constantly changing views.

Prof. Fred G. Lechner, agricultural engineer at the College of Agriculture and Life Sciences, built the unit. Previously, he designed four other models for use in homes, schools, and commercial establishments.

As with other models, the new planter has an automated watering system for all the trays. Lighting also is controlled automatically with a timer.

Since the plant trays, all loaded with potted plants, go around the bank of lights, plants receive light from all directions, similar to those grown outdoors under natural conditions.

The new planter uses no more electricity than the previous ones, except for a small amount of additional power to run the motor that moves the trays.

The average homeowner with no special training in shop work and electrical wiring should not attempt to build the model at home. “Some parts could not be constructed easily by the average homeowner,” Lechner warns.

Plans for the new planter are available from the Department of Agricultural Engineering, Cornell University. A bulletin explaining four other models, along with plans, also is available for 35 cents from the Mailing Room, Research Park, Ithaca, N.Y. 14853. The bulletin is titled “Cornell Automated Plant Grower,” Information Bulletin 40.
A Sound Approach...

Reaching Hard To Reach Audiences

by MARIO MAZZA ’75

What’s small enough to hold in your hand, weighs about five ounces, costs less than fifty cents to make, can be used over and over again, and can change people’s lives?

Actually, it’s a cassette. Cassettes have come into special use recently as a simple educational tool in underdeveloped rural areas.

The Cassette Special Communication System (CSCS) is a project conceived by Prof. Royal D. Colle of the Department of Communication Arts. His objective was providing essential information on agriculture, family planning, health care, and nutrition to underprivileged families in rural New York State.

In the 1960’s, Professor Colle developed a proposal to use phonograph records to get ideas across to these “hard to reach” groups. On further evaluation, though, the phonograph method was found to be logistically and economically unsound. By 1970, however, the cassette was a widely distributed, easily used device. Simplicity, low cost and potential as a communicative medium were key factors in the development of CSCS.

This system has the advantage over radio, TV, and print in that it lets the consumer participate when ready. The exposure is not limited to a particular broadcast time, when the audience might not be available. CSCS seemed more suitable than other media because much of the information was intimate in nature. Sexual behavior and family planning, for example, are not normally broadcast by the mass media. Cassettes are a more logical medium than print since many people in the target groups are illiterate. Others are uncomfortable and uncooperative when asked to read newsletters, brochures or bulletins.

CSCS is obviously a simple system. Many of Professor Colle’s critics said it was too simple. They claimed it was gadgetry. His answer to that was, “Some companies would rather pump $40 million into a satellite system than sink $1,000 into a cassette system which in this case would be more effective.”

Despite criticism, Professor Colle put the project in motion. He selected a group of advisors from the communities he wanted to reach. This localized the process. The advisors helped develop the content and plan the strategy rather than simply serving as messengers. Professor Colle emphasizes that he never came into direct contact with the target groups. “There was always somebody in between me and them, as a buffer. We never wanted to contaminate the project by having some Cornell professor seemingly use them as guinea pigs.”

Audio cassettes, as developed and distributed by College researchers, offer a possible channel of communication for information on agriculture, family planning, health care, and nutrition to rural families. This article focuses on attempts being made to fit the cassette into traditional and innovative information programs designed to improve communications among audiences served by the College of Agriculture and Life Sciences.

In CSCS, the advisor personally delivers the cassette players and tapes to the consumer. The equipment is kept by the consumer for six to eight weeks. New tapes are rotated weekly by mail. Many times, a participant may request one sooner or ask to keep the tapes longer. Sometimes the consumer may even form his own collection.

Each of the tapes is put together in the same format: a billboard, with an authoritative voice, announcing what the particular segment is about. This allows the listener to focus his mind; an interview, drama or monologue; a summary, repeating the important points. Each episode includes appropriate music. “Bluegrass” was primarily used since it was most identifiable by the rural audience.

All tapes are pretested prior to actual distribution. The advisors play them for close friends, get reactions and make appropriate changes at the next recording session. The tapes stress localization by using easily recognizable voices in each community. This, Professor Colle says, “provided and expert with competence credibility.” Also, great care is taken to use indigenous terminology so the listener feels he’s with his own kind.

The system was first tested in Yates County, New York. Initial reaction was 80 percent favorable. About 35 percent said the material was “very useful;” 40 percent said “somewhat useful;” 22 percent said O.K. or were neutral; and only 2 percent termed it “useless.” Data indicated that the majority listened to all the tapes and that many played them for others. Many also listened to the tapes more than once.

Similar projects are being tried in Ontario and Essex counties, with still another in Brooklyn.

Professor Colle tells us that consumer reaction was positive, in many instances, “because they are amazed that someone trusts them with the cassette machine.”

The system seems too good to be true. There are no
major problems. Cost was low, enthusiasm high, early problems headed off in pretesting. As Professor Colle says, "Constant contact with the advisors and the community kept us from making basic mistakes. For example there was originally a problem with music. We were using Country and Western music on the tapes. In pretesting, we found that this kind of music was too sentimental or melancholy and produced a negative reaction. So we changed the tempo of the music to bluegrass and recorded it that way."

What is the objective behind the project? Doesn't Cooperative Extension already distribute this type of information? Professor Colle says he is trying to "develop a system that works so we can provide a blueprint, a manual, so that any community can do the same thing. We can tell them what techniques we used. We can even provide them with model scripts (most of them written by Colle himself) which they can adapt to their own communities. The dramatization is the same. All they have to do is change the names and places to relate to their own community."

The objective is to create behavioral change. Although data on target audience change are still incomplete, the project proved helpful at various levels. "For example, in our first study the advisors were not in any sense professionals. They were not even attached to Cooperative Extension. By the time we finished many people wanted to go on and do more professional type work. One advisor wanted to make a career out of interviewing. He had developed a tremendous amount of self confidence."

Another instance cited the case of a woman advisor who gained knowledge in the process of doing the recording. She became an "auxiliary transmitter." Professor Colle says, "In Guatemala we found that the advisors took on new stature in their communities. One illiterate farmer became the equipment carrier. After hearing the tapes over and over, he could tell anyone who stopped him on the road about the advantages of using new sorghum seed. His role in the community changed because of his identification with the project."

The most vivid example of behavioral change occurred in a family consisting of a mother, father, and two children. The elder son was very distant from his father. Through communal listening to the tapes, the father and son began to get better acquainted. They saw how each had room for the other in his life. The father began to include his son in agricultural work. The entire family setting was gradually transformed, a welcomed side effect of the project.

It opened up previously closed channels of communication. Advisors became friends, bearers of good news, rather than intruders.

Can the system burn itself out? "I don't think so," says Professor Colle, "not if it's used correctly. What you have to do is cycle it, rotate it among families three or four times a year at most. There's enough information to cycle it for a couple of years."

Professor Colle would like to have the system burn out in one respect: "It would be nice if they learned enough so that there was nothing else necessary."

"The objective is to create behavioral change. Although data on target audience change are still incomplete, the project proved helpful at various levels."
Research Tower Raises Campus Profile

by JOANN KICHTON '75

During recent months another superstructure was officially added to the Cornell campus. The eight story Veterinary College Research Tower rises far into the sky to keep its watch over the Vet School. The $10.5 million required for planning, construction, and equipment was obtained from the State University Construction Fund.

Eighty laboratories provide facilities for research and study in physical biology (new radiation labs are used for study in this field), nuclear medicine, neuro-physiology, comparative medicine, and microbiology. Research is being done on nutrition, reproduction, and disease in animals. Cancer research is also being carried on. The laboratories are furnished with the most up-to-date instruments and equipment possible and two computers have been installed for the sole use of the Vet School.

Mobile walls are a special feature of the labs. Movable wall partitions allow for space alterations when needed and also make it possible to move large equipment or add new equipment when necessary. Most of the inside walls of the building are made from these partitions.

Modern facilities for animal care are provided for in the Research Tower. This includes a postmortem lab as well as surgery and recovery areas, and rooms for intensive care (there are thirty animal rooms, five surgeries, and seven surgical support rooms). In addition, offices, conference rooms, a lecture hall, and a cafeteria for hungry vet students are housed within the eight story superstructure.

Dr. George C. Poppensiek, Veterinary College dean, sums up the importance of the new research tower: "With this new center we will be able to expand further our research on the diseases of large and small animals, as well as their relationship to man. This work is important not only for the multi-million-dollar agricultural industry of the state, and the proper care of companion animals, but is also of growing importance to the study of human diseases which also are found in other animals."

James E. Dewey ’40 (Ph.D. ’44), professor of entomology and program leader of the College’s Chemicals-Pesticides program, has been honored with the Distinguished Achievement Award for Extension Entomology. The award, which consists of $500 and a plaque, was presented to Dr. Dewey by the Entomological Society of America for his efforts to provide expanded educational programs directed at the safe use of pesticides.

Donald W. Russell ’33, is retiring after 75 years with Monroe County, N.Y. in a variety of work assignments. He reports his retirement plans are indefinite, but he definitely plans to “play quite a bit of golf.”

Isaac Cohen ’23, reports he is self-employed and works on a part-time basis for the Silver Crest Processing Company, Elmhurst, Queens, N.Y., as a bacteriologist and supervisor of sanitary quality control.

Donald M. Tobey ’64, has been appointed Associate Prof. of economics and coordination of Recreation Facilities Management program at Johnson State College in Vermont. During the previous five years he was on the faculty of the University of Maine (Orono). He remains active in raising and showing registered Quarter horses, as well as judging horse shows in the U.S. and Canada.

Herb Saltford ’33, has retired from his position of superintending in Poughkeepsie’s parks in N.Y. He is now doing free-lance writing and remains active in local organizations. Both he and his wife (Bea Anton ’33), report that they like having family reunions in Ithaca with their two sons and daughter-in-law who is a professor at Cornell.

William J. Swanson ’40, retired from Eastman Kodak Co. He is presently Supervisor of Animal Tumor Research Facility at the University of Rochester Medical School, Cancer Center, Rochester, N.Y.

Julian D. Silverman ’38, has recently been appointed Liaison Coordinator between the Dept. of Social Services and Mental Health in the Suffolk County Dept. of Social Services, Suffolk County, N.Y. He reports that he left the poultry business in 1966 to work here.

Mrs. John F. (Lillian E. Rabe) McNeill ’24, reports her dismay over exorbitant reassessments, fantastic taxes and the steadily rising costs of feed, machinery and equipment that are driving farmers out of business. She still owns a 149+ acre farm which maintains part of a neighbor’s herd. She states that she finds membership in Cooperative Extension Orange County, Ag Division, Orange County, N.Y. very helpful.

Dermot S. Mace ’35, retired from the N.Y.S. Dept. of Environmental Conservation in 1972, after serving there for 37 years. He now spends four months in Florida during the winter and the remaining eight months in his new home in Crown Point, N.Y.

Mrs. H. V. (Evelyn O.) Northrop ’32, is about to retire from her work in El library and teaching 3rd grade at Red Creek Central. She attended Oswego, U.S.C. Oswego in 1960 to train for her elementary teaching M.S. degree. She reports that teaching has been exciting. However, that the past few years have been a disappointment due to changing values in society and children who are less inspired or inspirable. She feels that parents are not doing their job and that education needs everyone’s involvement.

Richard L. Strangeway ’50, was recently elected Vice President of Region VI of the National Vocational Agriculture Teachers at their convention in New Orleans. He will serve a three-year term.

Seymour D. Goodman ’60, is currently serving as a Soils Resource Specialist with the U.S.D.A. Soil Conservation Service in Albany, N.Y.

Bernard Rodee ’55, is a Product Manager for the Agricultural Division of Upjohn Company.

Norman J. Smith ’50, completed 25 years of county agent work. He worked in Madison and Nassau counties for 17 years and Cumberland County, N.J. as a vegetable production specialist. He took one year sabbatic leave this year and studied agriculture in Brazil, Republic of South Africa, United Kingdom, Netherlands, Japan, Taiwan, Canada, Laos, Cambodia, India, and Israel. He learned that American agriculture is appreciated more by people who do not live in the United States. He reports that Japan was the most interesting in the utilization of plastic mulches, row covers and greenhouses to increase their vegetable production. Also that Japan is leading the world in intensive agriculture and railroads for public transportation. He expresses a closer scientific relationship with the Japanese agricultural workers.

PICTURE CREDITS

Page 5, 6 — Joseph Gomber; page 4, 16 — Vincenzo DeLorenzo; page 12, 13 — Royal Colle; page 10, 11 — Laboratory of Ornithology; page 8 — Ithaca Journal; page 8, 9 — Historic Ithaca; page 14 — Cornell University; page 1, 3, 7, 11, 16 — Dept. of Communication Arts.
However you measure it, agriculture is the Empire State's leading industry. Farming alone generates more than 1.3 billion dollars annually in cash receipts. The combined food and agriculture industry amounts to nearly 6 billion dollars of value added.

Cooperative Extension, through the New York State College of Agriculture and Life Sciences, is dedicated to serving and supporting a strong, dynamic commercial agriculture. It accomplishes this by providing educational programs designed to improve farm incomes and levels of living on a continuing basis for this essential part of the State's economy.

Consumers reap the benefits of Cooperative Extension's service to agriculture by being assured a consistently safe, dependable, and economical food supply.
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A short drive from the heart of the Cornell campus there are several hundred pigs, cattle, and sheep hard at work. All of these animals serve the basic functions of teaching, research, and extension. They are part of Cornell's ongoing effort to help man solve the pressing world food crises.

The animals used by Cornell researchers are scattered throughout Tompkins County, and other areas in New York State. Some 400 pigs belonging to Cornell can be found at the Pine Tree Road swine barns. Across the street, Cornell houses its 500 sheep. These sheep will be moved to the Hartford Center, which presently holds the University's dairy cattle, by the summer of 1976. During the warmer months, the beef cattle are pastured in several areas, including Vegetable Crop hill and Mount Pleasant Farm. Research horses and ponies can be found at the Old Warren Farm, not far from the University golf course on Warren Road.

The Department of Animal Sciences in the College of Agriculture, in conjunction with the Veterinary School, conducts the bulk of the animal research done at Cornell. Animal research is made available to farmers throughout the world through various agricultural agencies. The animals and related research programs also provide many opportunities for instruction on both the graduate and undergraduate level. International graduates from the Animal Science Department have been able to use their knowledge in such faraway places as Nigeria and Colombia.

A student at Cornell may learn detailed information about a wide range of farm and household animals. Among the more popular courses are those in dairy and beef cattle, sheep, horses, and swine.

The student in a course dealing with dairy cattle will soon learn of the concern for increased milk production and feed efficiency. Ongoing research at Cornell also deals with the improvement of breeding and the now widespread usage of artificial insemination. Beef cattle are being utilized to determine the nutritive value of the more economical acid-sprayed corn as a feedgrain.

In the area of sheep research, Cornell has over 500 ewes in its stock. Sheep are used for many different types of research, as they are often easier to handle than some of the larger animals. Researchers are seeking methods to increase lambing rates, develop model systems of sheep management and increase production.

The role of the horse as a "servant of mankind" has dramatically changed in the last century. No longer basically a work animal, the horse is used primarily for pleasure. Research in the areas of nutritional requirements, digestive physiology, and gait analysis are directed towards breeding an improved equestrian animal. In addition to research animals, the Cornell Athletics Department utilizes horses for instruction, and ponies for polo competition.

Every fall the students in swine production take on the responsibilities of caring for a sow just before she farrows. After the arrival of the new litter, the students keep accurate records of the piglets' growth and maturation. These pigs are later used for research dealing with nutrition and lower-cost pork production.

Frequent byproducts of animal research at Cornell are familiar consumer items. Many of the dairy products are sold directly to the public at the Cornell Dairy Store, located in Stocking Hall. Students work at a commercial butcher shop in the basement of Morrison Hall. Cowhide and wool are among other animal products that are made available.

Small animals found at Cornell include Clyde McKay's famous breed of dogs, gerbels, chickens, turkeys, ducks, mink, rabbits, rats, hamsters, guinea pigs, and sometimes turtles.

Each of these animals also serves as a source of pleasure for many visitors. Throughout the year, extension agents, 4-H clubs, Future Farmers of America, and many statewide groups journey to the Cornell campus to view the wide variety of animals on hand. Often the animals are the subject of short informational or refresher courses.

As one can easily see, the animals at Cornell are hard at work helping men deal with the challenge of feeding the world's population.
Poultry Research: Improving Nutrition

by MARIE McCULLOUGH '76

In 1928 Democrats belittled a Republican campaign flyer titled, "A Chicken In Every Pot." With a weekly salary of about $17.50, the average workingman could hardly afford the luxury of a chicken dinner.

But today, chicken consistently remains one of the lower priced meats, thanks in part to research such as that of Cornell professors Dr. Milton L. Scott and Dr. Norman R. Scott. By working to improve poultry nutrition and thus rid the chicken of many devastating diseases, and by providing a more comprehensive understanding of environmental influences on poultry, these two men are helping to make "a chicken in every pot" a realistic dream.

Dr. Milton L. Scott, (who is not related to Dr. Norman R. Scott, despite the coincidence of their surnames), is a professor of animal nutrition in the College of Agriculture and Life Sciences. He has been investigating the role of selenium in poultry nutrition since 1957, when a dietary requirement for the element was first suspected.

"Most early nutritional studies indicated that selenium simply had a sparing effect on the vitamin E requirements of various animals," Dr. Scott says. But by 1970, his experiments with chickens conclusively proved that selenium is an essential nutrient "per se" for poultry.

Some of Dr. Scott's experiments leading to this discovery dramatically demonstrate its importance. In one experiment, for example, chicks from selenium-deprived hens were fed a selenium-free diet. Severe degeneration on the pancreas resulted, even when all other known, important nutrients were included in the chicks' food. By adding as little as .02 parts per million of selenium to this diet, the pancreatic degeneration was completely prevented. In another test, selenium counteracted a horrifyingly debilitating disease called exudative diathesis, in which increased permeability of blood capillaries causes fluids from the chicken's blood to flow into and swell the body tissues. Selenium was shown to affect the "hatchability" of eggs from hens fed selenium-deficient diets.

The diseases Dr. Scott diagnosed, and also numerous others, had been occurring in various parts of the United States before their relation to a selenium deficiency was recognized. But finally, the many deaths in a large flock of turkeys in Ohio were traced to low levels of selenium in both the corn and soybean feed produced in Ohio. Similar cases, involving lambs and calves as well as poultry, made it clear that many commercial poultry and livestock feeds needed a selenium supplement.

But poultry production is affected by many variables, not only those related to nutrition. Dr. Norman R. Scott, professor of agricultural engineering in the College of Agriculture and Life Sciences, is examining some of these other variables - or "stressors" - imposed on the chicken by the environment. Working in conjunction with Dr. Ari van Tienhoven, professor of animal physiology, Dr. Scott is measuring the effects of external disturbances in temperature, relative humidity, air movement and surrounding surface temperatures, to learn about thermoregulation (regulation of body temperature) in poultry.

The implications and value of studying thermoregulation in the chicken are far-reaching and complex. Taking a somewhat futuristic view, Dr. Scott says, "Animal protein has been the Western world's solution to a properly balanced diet, because we have been able to afford the luxury of grain-fed animals. Today, however, the practice of feeding animals grain that could be consumed by humans is subject to question." If the "energy exchange between the animal and the thermal environment could be changed to improve the efficiency of feed utilization by reducing heat loss," presumably some of the grain now eaten by animals could be made available for human consumption.

The applications of this research required to achieve such a long-range goal are admittedly "far from simple." More immediately practical and useful to researchers in many fields are the "instrumentation techniques" being developed through the study of the chicken's thermoregulatory system. These techniques make it possible to obtain physiological data such as heart rate and body temperature from an animal without confining it or restraining it with wires. Thus experiments can be performed under nearly natural conditions, rather than conditions which disturb the animal, restrict its activity, or modify its behavior.

Dr. Scott and his co-workers have used tiny, short-range radio transmitters which, when implanted in the chicken, monitor heart rate and body temperature without restraining the bird. The chicken's hypothalamus, spinal cord, skin temperature, and respiration rates have also been monitored to gauge their responses to thermal environmental stressors.

The very distinct, very different investigations of both Dr. Norman R. Scott and Dr. Milton L. Scott give a hint as to the range and diversity of poultry research at Cornell. And their work is also an indication that perhaps "a chicken in every pot" is not an impossibility.
Wildlife Follows Farming Fortunes

by JON LIEBERMAN '76

From the boulder blemished, rugged little revolutionary farms of 200 years ago to the immaculately mechanized corporation farms of today, agriculture in New York State has undergone widespread changes. And with each sweeping development, the wildlife population of New York changed as well. Just as the form and function of farming has adapted to shifts in the society and its technology, so have wild animals living on or near the farms changed with the times.

The story begins in pre-revolutionary times, when settlers cleared the land and eked out a living from farming in the rolling and often rocky soils of what was to become New York State. British proclamation forbid settling west of the Appalachian Mountains, so the farmers made do with the less fertile Eastern land.

This trend continued through the 1800's. And as more and more woods were leveled for farmland, animals that thrived in the forests fled — the wild turkey is one such animal. By the 1840's, this previously popular bird was driven from the state, as were numerous wooded areas in which he had made his home. If one toured through New York at that time he would notice that the countryside was increasingly blotched with small farms, all cutting a piece out of the wilderness. By the 1880's, though, this trend was over. The nation was changing dramatically and so was agriculture; at this time northeastern farmers were feeling the pinch from the West.

Following the Revolutionary War vast tracts of land west of the Appalachians had been opened up. As explorers were followed by settlers, farms soon spread across the flat and fertile lands of the big river valleys and the great plains. Shortly after, farm technology that was especially suited to these flatter areas was implemented. Railroads which brought the fresh produce back to the Eastern markets were laid. By the closing years of the 19th Century, it was becoming painfully obvious that many Eastern farmers just could not compete.

As New York farms began to be sold or abandoned, woods succeeded to return, along with the wildlife in the forest. Through the present century, farms were continuously surrendered, so that by 1929 the State decided it would ease the farmers' load. In that year the Hewitt Act agreed to buy land from farmers who could no longer afford to stay. Most of this land was allowed to succeed into woods, and it was, in fact, so successful that by the late 1940's wild turkeys were spotted crossing the state line from Pennsylvania to New York.

The return of wild turkeys sufficiently inspired conservationists so that in 1939 they decided to aid in their propagation by the technique of trap and transfer.

"The trap and transfer involves capturing turkeys in one area and transferring them to a new, recently unoccupied habitat," said Dr. James W. Caslick of the Dept. of Natural Resources. "It has been quite successful, and it is the increased amount of forested land that has helped make it possible."

Presently there are healthy turkey populations along the southwestern tier of the state. The change has been so dramatic, in fact, that this species, which was nonexistent in New York only thirty years ago, is now populous enough to support limited hunting.

"There are two hunting seasons for wild turkeys," according to Dr. Caslick. "One in the fall and one in the spring which is for males only, so the females can bring off broods.

"Although the turkey population has been revived, other species of birds that live in the expanse of open farmlands have tended to decrease," explained Dr. Caslick. "Until just this past year and for several previous years the population was down, but with the increased availability of food the turkeys have thrived."

Declines in farming have been matched by an upsurge in wildlife populations, particularly those animals that need overgrown fields and woodlands for their food and shelter.

The return of the wild turkey to New York State has been aided by trap and transfer programs. The growth of extensive woodlands has encouraged the bird's survival.

(Continued on page 14)
Could you imagine trying to find your way home if you were dropped off 500 miles away in a totally strange environment without any sort of map or directions? It seems that the homing pigeon has this amazing capability, which has aroused the curiosity of scientists for the past several decades. Dr. William T. Keeton, professor of biology within the Division of Neurobiology and Behavior at Cornell, has done extensive research on the mystery of pigeon homing.

Dr. Keeton's research is designed to try to discover the mechanisms involved in the homing of pigeons. What guidelines does a pigeon use to determine its way back to its home loft from hundreds of miles away? Previous research on homing pigeons has revealed that the pigeon's ability to determine direction depends on its being able to see the sun. Further research has pointed out that the pigeon is able to compensate for the change in the sun's apparent position during the day. In our hemisphere the sun rises in the east, then moves through south at noon, and sets in the west. Through an internal clock, the pigeon knows that the sun moves at approximately 15 degrees per hour. An internal clock is possessed by all organisms. It's a mysterious means of keeping time internally. The internal clock of an organism can be shifted experimentally by artificially changing the periods of daylight and dark hours. This is similar to what a human being experiences when he flies from the U.S. to Europe within a few hours and then takes several days to adjust to European time. The internal clock of a pigeon is somehow correlated with the position of the sun in the sky so that the pigeon can determine directions from the sun. In other words the pigeon may use the sun as a compass. However, Dr. Keeton emphasizes that the homing of pigeons requires more than a compass. You may know which way is north or south, but you still need information as to where it is you have to go.

Dr. Keeton and his research team decided to re-examine the importance of the sun in pigeon homing. In their experiments pigeons were used whose internal clocks were shifted six hours fast or slow as well as pigeons whose internal clocks were unaltered. These pigeons were released miles away from their home loft on sunny days. Those pigeons whose internal clocks were shifted six hours fast or slow left the release site deviating 90 degrees to the right or the left of those pigeons whose internal clocks were unaltered and who vanished towards home. This is because the pigeons with the altered internal clocks compensated 15 degrees for each of the six hours that their internal clocks were changed. When these same pigeons were released in total overcast the results were quite different. It seems that both the clock-shifted birds and the control birds vanished toward home and there were no significant differences in their sense of direction. These results led Dr. Keeton and his researchers to several conclusions. They feel that the pigeon uses the sun compass when it is available, but pigeons can also use information from other sources when it is not. Also this alternate means of information is not influenced by known landmarks, since the pigeons can find their way home under overcast skies even from far away unfamiliar territories.
Dr. Keeton’s next step was to conduct a series of experiments to determine what the alternate systems might be and their relative importance. They chose to re-examine the hypothesis that the earth’s magnetic field may be a means by which the pigeon obtains directional information. Bar magnets were put on pigeons in order to interfere with their perception of the normal magnetic field. These pigeons were released from test sites on sunny as well as on overcast days.

On sunny days the birds had no difficulty in choosing the correct home departure direction, yet on overcast days these birds flew in random directions upon leaving the test site. Control birds carrying non-magnetic metal bars of the same dimensions flew towards home. These results seem to suggest that magnetic information plays a role in the pigeon’s homing behavior. Dr. Keeton feels that the earth’s magnetic field in the absence of the sun may serve as a second compass. Further experiments done by Dr. Keeton and his colleagues suggest that the magnetic-detection sensitivity of pigeons is extremely acute. Yet with the results provided from this research, Dr. Keeton emphasizes that the question of how organisms detect magnetic stimuli is still unanswered. But the search for these detectors has begun in his Cornell laboratory as well as in other labs throughout the world.

Dr. Keeton is currently testing the hypothesis that pigeons may be able to use olfactory information in navigation; until recently, the probability that this is the case had not been promising since the olfactory organs of the pigeons are quite poorly developed. This area is now being re-investigated due to the results of recent experiments.

Another area that Dr. Keeton and his colleagues are researching is the study of the development of navigational behavior. They have found that bar magnets will distort the first orientation of extremely young pigeons released away from home for the first time in their life even when it is sunny outdoors. Also, pigeons that are engaging in their first flight cannot orient themselves under overcast skies, even if they have previously been exposed in their aviaries to such cloudy weather. However, if the pigeons were exposed to overcast skies during training flights instead of just in their aviaries, it was found that they flew towards home when released on their first flight. According to Dr. Keeton, it is quite possible that both sun and magnetic information are needed for inexperienced homing pigeons. Dr. Keeton also points out that there are other factors that seem to confuse pigeons on their first flight and yet hardly have any effect on experienced pigeons.

Dr. Keeton and his colleagues are now attempting to learn more about the sensory capabilities of pigeons. One of Dr. Keeton’s colleagues, Dr. Mel Kreithen, has recently shown that the pigeon is very sensitive to barometric pressure changes which could be used as an important navigational cue. Other tests have brought forth evidence that pigeons can perceive the plane of polarized light which, in navigation, means that the sun may be used even on cloudy days as long as some blue sky remains visible.

Another area of homing pigeon study which has been investigated by Dr. Keeton is that of “release-site bias.” It appears that pigeons, when released from distant sites, almost never depart directly toward their home. When repeated releases are performed at a specific site, the pigeons show a consistent divergence from their home bearings which is what is meant by “release-site bias.” Since Dr. Keeton feels that these biases may pave the way to solving part of the map information needed by pigeons, he has done much research in this area.

In a series of experiments, pigeons were released from the Castor Hill Fire Tower which is located 89 miles north northeast of the Cornell lofts. Through repeated releases, it was demonstrated that the pigeons, upon departure, deviated approximately 60 degrees clockwise from the actual direction of home. They found that this clockwise bias occurred with both very young pigeons and old, experienced birds, during sunny as well as overcast days, and also, if the pigeons were wearing bar magnets. The same 60 degree deviation was also found in swallows and pigeons from non-Cornell lofts. Dr. Keeton concludes that this bias is probably a characteristic of the location from which the birds are released.

It seems that from all that Dr. Keeton has said and observed, the task of discovering the mechanisms involved in pigeon homing is going to be quite difficult yet extremely interesting. He feels that there are many mechanisms involved in the bird’s determination of its home direction, and that the components of these mechanisms can be put together in a variety of ways.
Natural Areas
Near The Cornell Campus

by LAURA CICCHETTI '75

Cornell University provides professors and students an excellent opportunity to observe plants and animals in their natural surroundings through the outdoor laboratories maintained by Cornell Plantations. Each natural area is an individual ecological niche, representing a distinct community of plants and animals. Management of these areas is directed toward a primary objective—preserving them as close to their natural state as possible. Here, in brief, is information about some of Cornell's natural areas:

• **McLean Bog.** Approximately 20 miles northeast of Ithaca. Contains 81 acres of woodland, brush, and boggy areas along Beaver Creek. Known for unusual boreal plant species not found elsewhere. Boggy areas provide a variety of cover. Some unusual insects, and *Zapus hudsonius* (jumping mice).

• **Eames Memorial Preserve.** Located 15 miles northeast of Ithaca near Freeville. A tract of 50-60 acres of boggy areas, a gully, and old growth. Known for its large trees, orchids and ladyslippers, and bog environment.

• **Frost Ravine.** About five miles east of Ithaca. Contains 37 acres of old farmland. Unfarmable ravine is undisturbed. Known as nesting area for many bird species. Cherry, cottonwood, and unusual plant species are to be found here.

• **Ringwood Preserve.** Seven miles east of Ithaca, near Mount Pleasant. More than 100 acres of mature hardwood forests. Known for high elevation, ponds, and trees. Unusual species of aquatic animals (four toed salamander) and plants.

• **Slaterville Wildflower Preserve.** Located eight and one-half miles southeast of Ithaca along a branch of Six Mile Creek. Contains approximately 400 acres of hilly woodland traversed by two streams. Known for ferns, liverworts, mosses, wildflowers, mixed forest.

• **South Hill Preserve.** Two miles south of Ithaca. Six acres of hilltop swamp. Known for resemblance to coastal plain of New Jersey. Coastal prairie plant association, pitch pine, prairie willow, and New Jersey tea.

• **Carter Creek Preserve.** Five miles southwest of Ithaca. Encompasses approximately 400 acres in the Connecticut Hill area. Reforested abandoned farmland. Known for hardwood trees, limestone gorge, and different kinds of ferns.

• **Newman Tracts.** Located at the foot of Cayuga Lake to the north of Renwick Heights. Five acres of wooded land, bound by two gorges. Once known as wildlife sanctuary for both plants and animals. Second tract located at junction of Fall Creek and Cayuga Lake. Approximately three acres.
Fly-By-Nights...

Bat Studies Aid Human Research

by KATHY McGOWAN '75

The silhouette of a bat in flight, darkly veiled by
macabre thoughts and superstitions, is a rare sight, yet
one full of unforgettable impressions and misconceptions
concerning this mysterious creature.

To William A. Wimsatt, professor of genetics, develop-
ment and physiology, these animals represent a different
kind of mystery. The clues, which he has been piecing
together for over 20 years, have taken him as far as
caves in Mexico in search for specimens.

In the “dungeons” of the college’s Emerson Hall, Prof.
Wimsatt keeps over 100 bats, including the awesome
vampire bat. Currently, these bats are being studied for
their remarkable reproductive capabilities.

The most intriguing part of Prof. Wimsatt’s research
is that even after the misconceptions concerning the
bats’ sinister appearances and habits are cleared up, the
anatomical and physiological characteristics of bats
present even greater reasons for puzzlement. Prof.
Wimsatt feels that, “although bats may not be the most
attractive of nature’s creatures, they are invaluable to
science for they have much to teach us about the basic
facts of physiology.”

Although seldom seen because of their nocturnal
habits, bats are, in fact, the most numerous of all ter-
restrial vertebrates, occupying every major land mass.
The order of bats, Chiroptera, is highly diversified,
consisting of 17 families.

One distinguishing feature among bats is their range
of body sizes. The largest bats are the “flying-foxes” of
Java which have a wing span of five feet. The smallest
bats have an eight- to ten-inch wing span.

As well as body sizes, the diets of bats also vary.
While many bats are insect-eaters, tropical bats will
also feed on fruit, and the nectar of flowers. One species
has evolved large enough hind feet and claws that it is
able to catch fish while flying over a water surface,
similar to a sea bird. A few species of bats are carni-
vores and will eat smaller bats and birds. And, of course,
the vampire bat, native to tropical regions, is maintained
on a substantial diet of fresh blood. The vampire’s victim
is generally a sleeping cow or horse, and if the chance
arises a human.

Such a high degree of adaptability may be related to
the age of the species. Originating in the Old World
Tropics, bats moved throughout the world long enough
ago for over six specialized families to evolve in the
Western Hemisphere. Throughout the ages, much folk-
lore concerning the vampire bat has come out of Europe.
Curiously enough, such bats never existed in this area
and are native only to the tropical Americas.

The echolocation abilities of bats has long been a
fascinating focus of study. Research in this area has
aided scientists in designing features for the first sonar
devices as well as aides for the blind. Yet, not all bats
possess the ability. The degree of echolocation seems to
be related to the type of prey the bat feeds on. Insect-
eating bats, who need to catch their small prey in
flight and in the dark, have the most sensitive echolo-

Although most people have little regard for bats, scientists find them interesting and intriguing creatures.
Because of his research Dr. William A. Wimsatt is known affectionately as "Cornell's Batman." His studies deal with the unusual physiological features of these nocturnal animals.

Reproduction is one area where bats clearly depart from the usual patterns found in other mammals. Prof. Wimsatt has found that the female bat is able to store sperm after copulating in the fall. This sperm will survive throughout hibernation until spring at which time fertilization of the egg will take place. Bats may also wake during hibernation to mate. Male bats also show atypical patterns in their reproductive cycle. Sperm is produced in the male during the summer and will remain active for 11 months. At the end of the spring, the male system will collapse until June when the cycle will begin again. One disturbing feature in studying this cycle, is that the hormone circulation is not synchronized with sperm production. What is keeping the sperm viable for such a long period of time is a question presently being researched. Prof. Wimsatt feels that this sperm storage phenomena may have broader implications. "In storing spermatozoa for such long periods, the common bats of Northern United States and Canada have been doing for eons what man is only now learning to do for artificial insemination of livestock and treatment of his own fertility problems."

Most of these unique physiological characteristics are found in bats of this area. Many of Prof. Wimsatt's specimens used in his studies have been collected in New York State. Although bats are numerous, they exhibit a cautious behavior which makes them difficult to observe in the wild. For those who may be interested in "bat watching" this spring, there are several areas where bats may be easily observed.

Now that the four hibernating species of bats have taken to the sky again, there is one technique recommended by Prof. Wimsatt for observing these bats. As you face the West at dusk, you may be able to spot bats flying over a lake shore. As well as the year round bats, there could also be two or more species of migrating bats seen in this area. During the summer months, an attic of an old house, barn, or church where it is quite warm will be full of nursing colonies of bats. These consist only of females and their offspring.

Man can no longer hold the bat accountable for its role in symbolizing darkness and evil. Yet the bat does represent nature's ability to add exceptions to her laws. Such exceptions remain haunting even to the physiologist.
If you think that the only living things out Sapsucker Woods Road are birds, you’re wrong. Out that very same road is a place called the Cornell Canine Research Center, and at that compound lives graduate student Ron Schassburger with a pack of wolves and a pair of coyotes.

The Canine Research Center is not a very awe-inspiring facility—just a cozy blue mobile home for Ron and a large pen for his wolves. What goes on there, however, is extremely interesting, because Ron—a student in Neurobiology and Behavior—is studying these animals and helping to unlock some of the mysteries that surround the wolf.

When most people think “wolf” they get a vision fairly filled with savagery and terror. But as Ron would be quick to tell you, this image of the wolf come more from Little Red Riding Hood and The Three Little Pigs than from the wolf’s actual temperament. In reality, wolves are like most other animals—they keep to themselves, get vicious only when cornered, kill only what they need, and never attack man unprovoked. Wolves are simply not the savage, primitive animals we make them out to be. Actually, they are very complex animals as can be seen in their social system, their intri-
cate communication network, and their sexual behavior. These are the things that Ron is studying.

Ron has six wolves, all named after Indian tribes. Two of the wolves—a male and a female—belong to him. They are Western Timber Wolves which were secured from the Seattle Zoo. The other four—two males and two females—are on loan from the Syracuse Zoo, but Ron adds, "I've grown so attached to them that I may end up keeping them somehow, too." The two Western wolves are older and more mature than the Eastern wolves and have taken over as the dominant wolves of the pack.

The social structure of the wolf pack is fascinating. The largest and strongest male will quickly assert his dominance as will the best female hers. This happens quite independently though, so that the dominant pair do not really choose each other as mate, rather they mate by virtue of their individual dominance over the other wolves of their sex. Other wolves of the pack will mate, but only under the control of the dominant pair. In this way, the pack produces only the best offspring possible.

The dominant wolves are easily recognizable. They are the healthiest animals and will usually be the first to confront intruders. In addition, only the dominant wolves will carry their tails up in the air. The subordinate wolves always keep their tails down. When a kill is made, the dominant couple always get first chance at the meat, though they will usually allow the other wolves to eat at the same time. Thus, the dominant wolves stay healthiest and strongest and minimize challenges and internal conflicts within the pack.

Wolf communication is very complex. Besides numerous tail signals, the wolves employ an entire range of vocalizations and some very distinctive scents. This again helps keep internal conflicts at a minimum because all these signals can be used in a battle of displays before actual fighting must occur. The displays are usually enough.

It is interesting to note that the wolf pack almost always turns the weakest member of the pack—usually the most subordinate female—into an outcast. In Ron's pack, Cherokee, the most subordinate female of the younger, Eastern wolves, is constantly harrassed and spends most of her time in an opposite corner of the pen, away from the others. "It's a shame," Ron told me, "because she was the most playful of the pups and now, for the most part, the other wolves won't have anything to do with her." Out in the wild, the "lone wolf" stays away from the pack but trails it and gets to eat only what the pack leaves behind.

Ron keeps a constant supply of dog food on hand for his wolves, plus they regularly get a special surprise. Twice a month, Ron picks up a dead horse or cow from the autopsy room of the vet laboratory and brings it into the pen. The wolves go through a thousand pound animal in less than two weeks. But they eat every bit of the animal, wasting very little. This is true in nature as well. Wolves are not senseless killers as sheep ranchers used to maintain. In fact, they perform a very important function in nature—their prey is usually the old or sick individuals in a herd for these are the easiest to catch. Thus, wolves can help weed out weak and diseased individuals from a herd of prey.

The fascination that the wolves hold for Ron comes from a combination of their beauty and their danger. "While they may not make good house pets, they've come to be quite friendly towards me," adds Ron. "They're dangerous, but they're also very graceful and beautiful. Really, it's an exciting combination."
years, the amount of farmland in New York decreased by about 300,000 acres a year. While this was good for forest animals, it probably caused the decline of birds that prefer open habitats."

So the coin is really two-sided. When one type of animal benefits from man’s alteration of the environment, another suffers. For example, pheasants, which are farmland birds, were abundant during the first part of this century. However, in 1943 and ’44 the population dropped off, and it is estimated that it will continue to be much lower than it used to be, according to a Regional Supervisor in the State Conservation Department.

While woodland and farmland birds have gained and lost in accordance with developments of man’s society and agriculture, animals that live on the edge between civilization and wilderness have remained relatively stable in number. The cottontail rabbit and ruffed grouse are prime examples. Both species experience periodic fluctuations in population but over the long haul stay relatively stable.

“Even though agriculture has gone through widespread changes, there always seems to be sufficient edge areas. This is due to abandoning of farms or, conversely, through the construction of new residential or industrial areas,” Dr. Caslick explained.

In addition to this, deer receive special care from conservationists due to their popularity as hunting game. “Certain key foliage that deer tend to feed on are surveyed by game management people, and on this basis estimates of the population are made. With this in mind, they then determine the number of hunting permits to be issued in an area,” Dr. Caslick said. “If deer are in abundance, then more permits will be issued; if they are scarce in an area, then they will be more restrictive.”

Other methods of maintaining wildlife populations revolve around manipulating the environment. This includes maintaining foliage and nut and berry plants for food, and clusters of evergreen trees for cover. One factor that is uncontrollable by men, however, is the weather. Over the last century, correlations between the decline in the deer population and the severity of the winters have been noted by a State biologist. Judging by the figures for this past year’s deer kill, the population now appears healthy. It was about 103,000 — the largest kill in New York’s history.

If 103,000 deer were shot last year, twenty to thirty times as many ducks are killed every year, not by shotgun blasts, but by the ingestion of the fallen lead pellets. Luckily, laws banning the use of lead shot for duck hunting are slowly but steadily working their way through state and national legislatures, according to Dr. Sam Weeds, Assistant Director of the Cornell Ornithology Laboratory.

The wetlands that ducks live on, however, are often the prime targets of civilization: motorboats, drainage, housing, etc. Like most things, the story goes back a long way to the time when this area was first settled. Between then and now more than half of the state’s wetlands have been destroyed. Perhaps it was first a community that slowly polluted a pond. Then areas were drained and filled for houses. Then water traffic. Then draining for airports. Since these areas are always treeless and flat, they are taken as the seemingly perfect place for such buildings.

Fortunately, ducks also have many friends amongst men. Private organizations such as Ducks Unlimited and the Audubon Society petition and appeal on their behalf. Even more importantly, the State and Federal governments have intervened to help waterfowl. The Environmental Quality Bond Act of 1972, for instance, provided $5,000,000 for the purchase of fresh water wetlands.

“Funds from soil conservation programs have also helped many farmers build ponds. And although these were usually near civilization, which may have partially hindered the growth of wildlife, they undoubtedly helped the situation,” affirmed Dr. Weeks.

“One of the most effective wetland preservation programs has been the (so-called) Duck Stamp Program,” Dr. Caslick said. “It is federally administered through the Post Office, and hunters must go there to buy stamps in order to shoot ducks or geese. It has been one of the most dominant factors in the purchase and preservation of wetlands.”

“Overall, pond ducks such as black ducks and mallards seem to be holding their own, but open water or lake ducks seem to be faring much more poorly. Right here in the south end of Cayuga Lake there used to be lots of red head ducks. Now there are hardly any, probably due to water traffic and dredging,” concluded Dr. Weeks.

What comes out of all this is the incontrovertible conclusion that man wields immeasurable power over the wildlife in his environment. Sometimes the power is spent inadvertently, driving a species clean out of the state; other times it is used in the management of game. One unavoidable fact is that as the human population increases, more and more species of animals become extinct. Is it really paranoia to wonder where the zoos end and the wildlife parks begin, or if the two are not becoming more alike? If it is paranoia, it is at least useful in counterbalancing the wanton forces of civilization.

Presently, there are 27 endangered species of mammals and 21 endangered species of birds in the United States of America. “Which ones will be saved is a matter that public opinion helps to decide. You and I may never see a whooping crane, but enough people became interested in saving them, and so it is,” Dr. Caslick concluded.
John Dyson '65, Millbrook, N.Y., has been nominated by Governor Hugh Carey as we go to press for the position of Commissioner of Agriculture and Markets. If confirmed, he will succeed Frank Walkley. Dyson is president of Dymer Communications, Inc., and publisher of several weekly newspapers in Ulster, Westchester, Nassau, and Suffolk Counties. He serves on the College’s Advisory Council and is a member of the College Development Committee.

Gordon L. Lamb '64 was recently named Outstanding Young Farmer of New York State by the New York State Jaycees. Gordon, who lives in Oakfield, N.Y., received the award at the Jaycee’s January State Convention in Cortland, N.Y.

Mike W. Whittier ’66, was recently promoted from instructor to assistant professor at Tulane Medical School in New Orleans. He was also chosen as director of the Tulane Basic Surveyor Training Institutes. In this position he is in charge of coordinating institutes in 38 subject areas, which are taught by 42 faculty members.

Ted J. Habgood '73, recently was promoted to assistant manager of the Margaretville branch of the National Bank and Trust Company, of Norwich, N.Y. He asks any friends or brothers who go skiing in the Catskill Ski Area, where he lives, to please look him up. He is engaged to be married in April.

George A. West ’23, reports that his agricultural heritage remains firm after the 50 years of changes which he has witnessed. To the ag students he says “keep up the good work to keep Cornell strong and innovative as it moves forward with the times.” He states that people of his vintage should step aside and let the “new” generation take over.

Cynthia Warner Terry ’73, is in her second year of medical school at Upstate Medical Center, Syracuse, N.Y. She married John Terry in June 1973.

Outstanding Alumni

The 1974 edition of Outstanding Young Men of America includes seven alumni nominated by the Alumni Association of the New York State College of Agriculture and Life Sciences.

They are: Leland Bookout ’61, Staatsburg, N.Y.; Peter Concklin ’66, Hudson, N.Y.; Frank Critelli ’60, New Hampton, N.Y.; Bruce Osadchey ’61, Ithaca, N.Y.; Paul Pentz ’69, Wheaton, Illinois; Richard Popp ’61, Castile, N.Y.; and Peter Ten Eyck ’60, Voorheesville, N.Y.

Professor Trimberger Retires From College

Professor George W. Trimberger, who coached the Dairy Cattle Judging Team through 24 years of unequalled success, retired recently from the College of Agriculture and Life Sciences. Over the years his teams have been unsurpassed in sectional and national competition. They have the best cumulative average of all college teams in the nation.

This last year’s team was no exception. Members were Linda Keene, Barbara Snider, Carol Inghis, and Thomas Dankert, alternate. They started out by placing first out of ten teams in the regional contest at the Eastern State Exposition. This was followed up by a third place showing at the Pennsylvania All-American Contest at Harrisburg. At the North American Dairy Show national competition in Columbus, Ohio, the Cornell team placed second.

Ag Alumni Breakfast Slated For June 14

The Alumni Association of the College of Agriculture and Life Sciences Annual Alumni Breakfast will be held Saturday, June 14, during Cornell’s Reunion Week activities.

The Association’s annual meeting will be held at this time also.

Recognition of retiring faculty will be the featured program, along with a report on the “State of the College” by Dean W. K. Kennedy.

Lee M. Day To Assume Research Center Post

Lee M. Day, formerly head of the Department of Agricultural Economics and Rural Sociology at the Pennsylvania State University, has been named director-designate for the Northeast Regional Center for Rural Development at Cornell University.

Day will succeed Prof. Olaf F. Larson as director of the Center on July 1, 1975, when Larson retires, announced Prof. Noland L. VanDemark, director of the Cornell University Agricultural Experiment Station.

VanDemark said that Day will work closely with Larson to become familiar with the Center’s programs and policies preparatory to assuming the post of director. Day also has been appointed professor of agricultural economics at the State College of Agriculture and Life Sciences.

PICTURE CREDITS

Cover and page 3 — Steve Lemmey; page 10, 11, 12, 13 — Thomas Apone; page 5 — Laboratory of Ornithology; page 6 — Cornell University; page 16 — Dept. of Communication Arts.
Enrollment Update

THE STUDENT BODY

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Summer At Sea . . .

Marine Lab Expands Program

by STEVE LEVINE '75

A new and unique addition to the special programs of Cornell's summer session will be offered at the Shoals Marine Laboratory (SML) this year. In addition to the established "Introduction to Marine Science" course, a new two week (3 credit) program: "Introduction to Nautical Science," and a seven week (8 credit) "Seagoing Apprenticeship" aboard the schooner "Westward" will be available this summer.

The SML, based on Appledore Island, Isles of Shoals, Maine, has been set up to offer interested students an opportunity to be exposed to many facets of marine environment. The laboratory is operated by Cornell in cooperation with the Sea Education association (SEA), the University of New Hampshire, and the State University of New York.

The new programs will deal with elements of navigation, seamanship, oceanographic techniques, and other related topics. According to Cornell's SML director John M. Kingsbury, the shipboard practice is, "a laboratory for the rest of the courses, in which students are making real and putting into practice the concepts they learned on the island."

Aboard ship, the eighteen enrolled students will lead dual lives. As students they will attend daily lectures. Then as sailors, they will be responsible for crewing the "Westward" and will stand regular watches on a rotating basis.

The SEA-owned Westward is a 100 foot, staysail, auxiliary powered schooner. Students will be sailing on this large, rare, American windjammer, which offers them both modern and traditional seafaring practices.

Instructing the ship's student apprentices are the Westward's seven officers, and several scientists who are responsible for the quality of the academic program.

Part of this summer's intended on-board studies will include a "whale watch", and experiments in underwater sound, utilizing the schooner's vast array of oceanographic and navigational equipment.

It is apparent that the educational facilities of this program are unique. Here, participating students are given the opportunity to practically apply their knowledge of nautical science. Based on these experiences, students will obtain a greater insight to formulate career decisions, and judge the educational and employment opportunities open to them.

It is Professor Kingsbury's philosophy that, "good teaching has to be a combination of bringing information efficiently to a student, but also giving him enough experience doing things and handling things so he can appreciate the information he gets vicariously." This is the combination of ideas being used at SML.

The structure of these programs is truly innovative. Rare are the courses that enable students and faculty to be in such close contact twenty-four-hours per day. These living conditions provide maximum educational interaction on personalized levels.

The values of a curriculum such as this are numerous. Along with the opportunity to participate in a special program, students have a chance to learn more about themselves. A certain level of maturity is needed to coexist on the island and on the boat for thirteen weeks total under close conditions with the other students and faculty.

For those students who are planning to participate at SML, this summer promises to be a most rewarding educational and personal experience.
As Springtime comes to Ithaca, frisbees and tennis aren't the only games Cornell students are playing. In an effort to improve the quality of higher education, professors in the College of Agriculture and Life Sciences are introducing the competitive and stimulating aspects of games into their classrooms. These are not ordinary games; for they are based on "real-life" business situations. They allow Cornellians to utilize their textbook knowledge, expertise, and intuition in an effort to make successful business decisions.

One such game is played in "Marketing," an Agricultural Economics course. Students initiate transactions based on the activities of the commodities markets. The commodities markets are the exchanges in which agricultural products such as grain, livestock, and dairy products, as well as other raw materials such as precious metals and lumber, are bought and sold every day. The trading process of the commodities markets provide the price basis from which industries operate. In this way, the commodities markets form an integral part of the U.S. economy, and are of vital concern to a student interested in business, and especially one concerned with food and agricultural marketing.

The idea of the trading exercise was introduced by Prof. L. B. Darrah, professor emeritus. According to Prof. Dana C. Goodrich, who teaches the course, this trading exercise allows Cornellians to "increase their awareness of the importance and pervasiveness of marketing...and represents the only opportunity for students to establish a real connection with a marketing institution." When Professor Goodrich assumed instruction of the course in the early 1970's, he worked with Prof. Doyle Eiler and computerized the game allowing for greater sophistication.

Each of the 295 students registered in the course is given an imaginary drawing account of $12,000 to invest in the market. His/her aim is to act as a speculator and yield a profit. What is real, though, are the facts and figures of the commodities markets, upon which the students base their transactions.

In order to minimize confusion and maximize the learning experience, Professor Goodrich chooses a specific part of the commodities market, the futures market, for the students to invest in. In the futures market one buys and sells contracts that call for delivery in the future. Professor Goodrich has selected six commodities for his class to deal with: July wheat; July soybeans; June cattle; July frozen pork bellies; May iced broilers; and May Maine potatoes. The months refer to the dates that speculators must either deliver or accept delivery of the commodity, depending on whether they choose to sell or to buy.

The students try to predict how the market prices for the contracts will fluctuate in the future. If, for example, the student feels that the price of July wheat will increase in the future, he buys wheat contracts now in the hopes of selling them at a higher price later on. Conversely, if he feels that a decline in price is

Students study the Marketing Board to check the prices of their commodities and evaluate their progress.
Students rush to the board between classes to make transactions.

imminent, he will sell contracts now and buy them back at a lower price in the future. In order to offset a contract a student simply makes the opposite transaction. That is, if a student bought wheat, he would now sell it, thereby nullifying the original contract.

Prices are posted four times a day, as with the real exchange, and are easily noticeable on the large bulletin board next door to Professor Goodrich's office at 254 Warren Hall. The prices reflect what real investors in the market feel the commodity will be worth in the future.

After checking the current prices, the students decide whether to buy or sell. They record their orders on IBM transaction cards and drop them in a locked box next to the large bulletin board. Each week every student receives an account statement showing the results of his transactions to date. Professor Goodrich noted that although only a few students speculate successfully and end up making a profit, there is wholehearted agreement among the class that the trading experiment is both valuable and fun.

This year Professor Goodrich has also launched a new "game" in the course. It is an exercise in marketing research. During Spring vacation groups of students visit their local supermarkets and gather observational data on the behavior of retail consumers. The students seem enthusiastic and Professor Goodrich eagerly awaits the results of this new experiment.

Cornellians are not just playing games in Marketing, though. Every Friday last semester, the 250 students enrolled in the Introduction to Business Management, played the Executive Game, an exercise in which students must make business decisions. Each group of students is given an initial sum of over one million dollars in cash and inventory. In the first discussion section each group decides what product they would like to produce. The remainder of the semester is spent making managerial decisions such as: ascertaining what the price of the product should be and the number of units that will be produced, amount of capital expenditures, size of the advertising budget, amount of funds to be allocated for maintenance research, and the labor requirements of the corporation. Each group represents an individual business, and competes with other businesses in the class. Each week every business receives a computerized progress report. The student-run companies are free to change their management decisions at any time, as long as they have the necessary funds needed for their new transactions. Prof. Dennis R. Lifferth adds further excitement to the game by controlling the general economic index. He affects the economy by creating inflation or deflation. Therefore, not only must students be concerned with the effective functioning of their businesses in the present, but they must also make predictions about the future. At the end of the semester each business analyzes its various strategies and writes up an annual report, like a business firm does, evaluating performance and progress.

Professor Lifferth noted that according to student feedback and the results of the course evaluation, most of the students regard the game as an enriching learning experience. He also added that the Ag College has accepted and encouraged the program.

Through the use of "games" the College of Agriculture and Life Sciences is improving higher education at Cornell, by allowing students to become involved in the day-to-day activities of the "real world." Such first-hand participation and experience serves to better prepare a student for the business world.
Self Teaching . . .

Look, Listen, and Learn
by MARIE McCULLOUGH '76

"Autotutorial" (A-T) and "audio-visual-tutorial" (A-T-V) are part of a new jargon in education at Cornell. They describe a teaching format which uses written study guides or a combination of "audio" and "visual" study tapes to develop self-contained instruction units which have very specific objectives. These units are designed for self-paced, self-teaching, an ideal long incompatible with the conventional lecture format of most college courses.

Most A-T & A-T-V courses now offered at Cornell are still fairly new and are subject to experimentation, re-evaluation, and criticism, just like any innovation. Early complaints charged that these courses were "depersonalized," "too mechanized," or "less effective than conventional lecture methodology." But as adjustments have been made, the A-T and A-V-T formats have proved to be very effective and efficient, especially in the sciences and mathematics.

Introductory Biology 105-106, for example, was specifically designed two years ago as an autotutorial alternative to Biological Sciences 101-102, a lecture course for majors and nonmajors. Biology 105 has operated at its 250-student maximum capacity since its inception and the vast majority of those enrolled go on to take Biology 106 the following semester. This continuation often represents the path of least resistance, but in other cases, students find they prefer the autotutorial format because of its unique advantages.

A syllabus handed out in the first week of the course details the required and optional units to be studied during the semester, along with the dates for unit tests and labs. The student is given a study guide for each unit, complete with a listing of specific learning objectives and problems. For example, a unit study guide on genetics might list an objective: "To be able to determine the genotypic and phenotypic ratios in a dihybrid cross." Then sample problems involving dihybrid crosses might be provided. While listening to a cassette tape recording of unit information, the student may take notes and work the problems in the study guide. Teaching assistants and instructors are always available to answer questions and the "learning center" is open for use every day.

While this simple set-up ideally allows the student to study at his convenience, and at his own pace, in reality it may invite procrastination. Predictably enough, the first students to take Biology 105-106 often postponed unit tests, sometimes until months after the proposed deadline. A modification was made and now there is a penalty for each unit test not passed within three weeks after the deadline. This rule constitutes no real hardship, however; it still allows ample time for retakes of a test not passed on the first try. Individual unit tests are not even given letter grades.

The final grade is primarily based on the number of required units passed. This grade may be augmented by completion of optional units, and it may be slightly raised or lowered by the final exam. The final is another modification of the original curriculum, made to encourage students to look at the instruction units collectively, instead of just individually.

At another Cornell learning center, the audio-visual-tutorial format has been making Physics, a sometimes difficult requirement, easier for many students. Half of the third floor of Rockefeller Hall is devoted solely to study and testing for General Physics. Students must meet with their assigned Teaching Assistant and have their notebooks signed before taking unit tests, but there are no absolute testing deadlines as in Biology. A minimum of self-disciple is required, however, to avoid the corridor-long lines of students waiting to take tests at midterm and the end of the term.

On a smaller scale, Cornell's Agricultural Engineering Department has developed several courses, taught
either wholly or in part using the A-Y-T format. Professor Gerald E. Rehkugler inspired these developments when he set up his A-V-T "Farm Power" course two years ago. Five carrels with built-in slide projectors and tape recorders, costing about $'100 each, were designed and built by members of the Department, and comfortably accommodated the 27 students in the first audio-visual-tutorial Farm Power course. Other faculty members were intrigued by the potentials of the A-V-T format and now 10 carrels are available for use by students in: Professor D. A. Haith's "Introduction to Environmental Systems Analysis" course, Professor W. F. Millier's "Farm Machinery" course, and other courses.

"Students are enthusiastic about this mode of instruction," Professor Rehkugler says. "At the end of the first semester (of the Farm Power course) about 90 percent indicated preference" for this approach over the conventional lecture mode. "The 10 percent who were opposed were primarily concerned about feedback they felt they would have gotten in a lecture." And this complaint is only a minor one, because the class lab session, a weekly meeting separate from A-V-T work, offers considerable opportunity for "feedback."

Hopefully, the future Cornell student will not simply walk from one videotape and headset to another, as he goes from class to class. Discussion, feedback, and teacher-student interaction will never be outmoded. But certainly the advantages of specific instructional objectives, self-pacing, and immediate review, inherent in these A-T and A-Y-T courses, will help shape future curriculums.
The College of Agriculture and Life Sciences Fund was at work for the College in 1974.

- 154 students received scholarship aid.
- 6 new innovative teaching programs were funded, bringing the total to 18 now in operation in the College.
- 18 gifts for special projects in the College were received.
- 5 projects were developed to assist in Fund raising projects for the College.

Summary of Gifts to the College of Agriculture and Life Sciences Fund

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New Scholarship Funds That Were Established in 1974

The Robert V. Call, Sr. Memorial Scholarship.

The endowment fund that honors the memory of Robert V. Call, Sr., has been provided by his family. Mr. Call, a long-time farm operator in western New York, contributed much to modern agriculture in New York State. This tradition is now being carried on by the family of Robert V. Call, Sr., in western New York.

The award will be made to students in any class in the College. The selection will be based on character, scholastic record, and financial need with preference given to students from Genesee and Orleans counties.

Professor Glenn W. Hedlund Scholarship.

The endowment fund that honors the name of Professor Glenn W. Hedlund has been provided by his friends and colleagues. Professor Hedlund was a faculty member in the Department of Agricultural Economics for over 40 years.

The award will be made to students in any class in the College. The selection will be based on character, scholastic record, and financial need with preference given to students in agricultural economics.

Grove W. and Agnes M. Hinman Scholarships in Agricultural Sciences.

The trustees of the Grove W. and Agnes M. Hinman Foundation of Hamilton, New York, have established these scholarships.

In awarding these scholarships, character, scholastic record, and financial need will be considered. Preference in granting the awards will be given to transfer students and entering freshmen from Madison County. Second preference will be given to students from the central New York area, specifically the counties of Oneida, Otsego, Onondaga, Chenango, Herkimer, and Cortland. Once committed to a student, the foundation will provide scholarship aid to the student each year, provided that the student maintains satisfactory progress toward his degree.

Professor Robert M. Smock Scholarship.

The endowment fund that honors the name of Professor Robert M. Smock has been provided by his friends and colleagues. Professor Smock, a faculty member in the Department of Pomology for over 36 years, made an innovative scientific contribution to the controlled atmospheric storage of fruits.

The award will be made to students in any class in the College. The selection will be based on character, scholastic record, and financial need with preference given to international students from a developing country who pursue study in the area of pomology.

Scholarships in Food Science and Marketing

The Institute of Food Science and Marketing Advisory Council, which is made up of a cross section of food science and marketing industry, service, government, and education, has formed a special Scholarship Committee which has established 13 new annual scholarships at $500 per year.

They are as follows:

- Eastern Dairy Deli Association .......................... 2
- Eastern Frosted Foods Association ......................... 2
- Crowley's Milk Company, Binghamton, N.Y. ........ 1
- Dunkirk Ice Cream Company, Dunkirk, N.Y. .......... 1
- Cuba Cheese Company, Cuba, N.Y. .................... 1
- Sugarlo Company, Atlantic City, N.J. .................. 1
- A.M. Axelrod and Son, Inc., Patterson, N.J. ......... 1
- Genesee Brewing Company, Rochester, N.Y. ........ 1
- Upstate Milk Cooperative, Inc. ......................... 1
- Grandview Dairy, Inc., Brooklyn, N.Y. ............... 1
- Queens Farms Dairy, Inc. ............................... 1
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Where Experience Is The Teacher

by THOMAS APONE '75

Not all the learning that goes on at Cornell comes from a lecture in a classroom. Much of it comes together in the field. Practical experience is the element that bridges the gap between theory and reality, and often between confusion and comprehension.

Cornell classes participate in hundreds of field trips each year. Pictured here are a few of them. These include producing maple syrup (right and below); printing the Cornell Countryman (left); inspecting Cornell's water filtration plant (lower left), and learning how to handle a tranquilizer gun for wildlife research (lower right).

Field trips are a vital part of a Cornell education. They supplement and enrich classroom work by bringing subject matter into sharper focus, thus promoting clearer understanding. And this, after all, is the true goal of education.
Through WHCU... Cornell Part Of Radio’s Growth

by KAREN UNDERWOOD '75

Ithaca’s WHCU AM-FM is a powerful regional station. Its signal can be received in 22 counties in New York State and nine counties in Pennsylvania. The station is not only powerful in wattage, but also in influence. WHCU has become an institution in this area. Many of the station’s personalities have been a part of Ithaca’s daily routine for many years. One such early veteran is Jack Deak. Jack has been pleasantly waking up Ithacans on his early morning show since 1940.

WHCU is owned and operated by Cornell University. It may seem unusual for an educational institution to own a radio station. But radio has been linked closely with education. In the early stages, the technology of radio tested in educational institutions was applied to make radio a viable means of communication. Later the two were further linked when radio became a beneficial educational tool.

The Cornell station had its beginnings in the Electrical Engineering School in 1916 where it was run on an entirely experimental basis by students. There were no specific hours of broadcast and the call letters assigned sounded much like a license plate number: 8 YC.

The station left the experimental stage in 1923 when the Electrical Engineering School was granted an AM broadcasting license with the call letters WEAI which stood for “We Educate and Instruct.” The Cornell radio station had become one of the first stations in the country.

In 1929, WEAI was on the air from 12:00 noon to 1:20 daily, Monday through Saturday. Living up to the meaning of its call letters, the station’s program format was 100 percent educational and agricultural, used mainly as a vehicle for the Extension Service. It was also in this year that the station filed for renewal of their license with the Federal Communications Commission. The renewal application states that phonographic or mechanical reproductions were used occasionally and were announced on the air as being “phonographic reproductions.”

WEAI sounded slightly more modern in 1930. It began to announce phonographic reproductions as “phonographic records.” The programming and broadcasting also took on a more modern and ambitious character. The station operated now two hours a day providing educational programming. The noon hour was devoted to interests of the College of Agriculture and the Veterinary College. A late afternoon show called the University Hours brought together many issues designed to reflect the University as a whole.

The following year WEAI was granted a modification in its license. It could now change its transmitting power from 500 watts to 1,000 watts and occasionally broadcast after midnight. With WEAI’s expanded power and reach into the community the station became more than just a college station. Cornell, seeing its future importance to the community, adopted the following resolution:

“In view of the intimate association of the University Radio Station work with the educational activities of the University, a committee should be appointed to report on the appropriate policy to be pursued to make the station attain its maximum quality as an instrument of educational value.”

Acting on this resolution an eight-member committee was formed in 1931. It recommended to the University that a salaried professional staff was needed to produce the daily two hour-long programs and that a studio should be built which would be completely separate from classroom activities.

A sub-committee of the University Radio Committee made a further suggestion that the station sell time to help pay for operating costs. This was the first time that the idea of selling time on the Cornell owned station was mentioned. The committee set restrictions on the sale of broadcast time. They suggested that the University colleges wishing to broadcast educational programs reserve the amount of time they needed before any time could be opened up for the use of commercials. Also commercial programs were not to originate in the campus studios and such programs could not use the call letters WEAI.

The following year WEAI adopted the Committee’s recommendations to operate with a professional staff and sell broadcast time. To gain this professional staff the radio was leased to the broadcasting divisions of the Elmira Star Gazette. Educational broadcasting under the supervision of the Electrical Engineering School would remain in Ithaca. Meanwhile the commercial broadcasting moved off the campus to studios in the Mark Twain Hotel in Elmira under the call letters WESG. The transmitting towers remained in Ithaca.

However, this arrangement backfired in 1940 when the FCC reviewed the management contract for WESG. The FCC told Cornell either to run the station itself or give it up since the FCC requires that the management of a station be direct and not shared. It also became necessary for the station to be entirely self-sustaining.

Management of the station was returned to the hands of Cornell and it returned to Ithaca in 1940 with its present call letters WHCU, meaning “Home of Cornell University.”
WHCU hired a station director from Utica, Mike Hanna, to run the new operation. Cornell gave Hanna the empty Cornell Countryman building then on the present site of Malott Hall, to set up the station.

Starting Cornell's commercial broadcasting station was a challenge to Hanna. He had no news service, no music library, antique radio equipment, and most crucial of all, no staff! In June of 1940 Hanna received an order from the FCC stipulating that WHCU must go on the air in 72 hours. Hanna rushed all over the campus grabbing anyone to be his staff. WHCU went on the air within 60 hours on June 3, 1940, with a staff of thirty playing borrowed records on borrowed turntables.

The early studios in the Countryman building were far from ideal. The building was meant to be a temporary one and the walls were paper thin. Many times a “hey you” from a passing student went out over the airways. The staff even had to be careful in walking around the studios when a record was on to prevent the footsteps from jumping the record.

Despite the moving floorboards and paper thin walls, the station grew. WHCU became influential in reporting area news and stimulating issues of public interest. WHCU became an even more integral part of the community through its extensive coverage of Cornell and Ithaca sports. In order for the station to broadcast a Cornell “away” football game for the first time, Hanna passed a hat among students to lease a telephone wire to Dartmouth. He even enticed a newspaperman who was an ardent Cornell fan to do the play-by-play announcing gratis. However, the announcing was not entirely objective, because the newspaperman referred to Cornell as “we” and Dartmouth as “they.”

Soon after the station moved so that the staff no longer had to tiptoe around to combat paper thin walls. WHCU's first complete studios and offices were located on the fifth floor of the Citizen's Savings Bank building in downtown Ithaca.

WHCU's studios have been located over the College Spa Restaurant on East State Street since 1956. Its programming enhances the Ithaca and Cornell Community. For example, it airs a program written by and for senior citizens to help them with health problems, and to tell them of the group's many meaningful activities. Another show, "Know Your Birds," narrated by the late ornithology professor Dr. Peter P. Kellogg, received an enthusiastic response from the community for many years.

Cornell University students have a large part to play in the station's development as they did in the early experimental days. Many Communication Arts students work part-time at the station in the areas of news, broadcasting, and sales. A 1974 graduate of Arts and Sciences, Stan Reaves, has developed and written his own show called Nitesounds to provide a black perspective in radio. Many other black Cornell students work with Reaves in producing the show.

WHCU has paralleled the growth of Cornell University. As Cornell continues to exert an educational influence throughout New York State, WHCU serves to transmit this new knowledge to its listeners. The close tie between Cornell University and WHCU has proved beneficial to both. The technology learned at the University level was the seed to start the station and the station became instrumental in Cornell's educational process. From an experiment in the Engineering School in 1916 to a powerful regional station it can truly be said that: "You've Come a Long Way WHCU."

Sam Woodside, WHCU sportscaster, Carl Snively, Cornell Football coach, and Sid Ten Eyck, WHCU program director broadcast from the old WHCU studios in 1940.
The amount of information a college student needs to absorb in a four year span is increasing at a fantastic rate. This effect of rapid change is reflected in the frustrations of a student who is unable to relate the masses of facts and bits of details to a meaningful objective. Part of this learning problem stems from the educational system itself, which is still geared towards such traditional teaching methods as memorization or learning by rote.

A learning tool recently employed in an animal and plant genetics course helps to deemphasize such negative and outmoded approaches to education. This tool is the concept map.

The concept map increases the student's awareness of the total workings of a subject area by stressing the relationships between concepts or general ideas. The student is left with a complete picture of a subject where facts can be meaningfully fit into the course scheme.

The concept map is a two dimensional diagram which connects the different topic areas of a field of study together. Instead of isolating the facts to be studied, the map allows the facts to retain an active role. Facts are presented in a meaningful context by visually relating them to other aspects of the field. In using the map, the student is able to view the subject as a whole process rather than bits and pieces of unrelated information. Unlike outlines or other condensed study forms, the concept map highlights the interrelationships of important information on one page.

The advantage of the map is that the information is easily and simply stated. This helps to deemphasize the need for rote learning by increasing the student's understanding of a particular subject.

The maps appeal to the students' emotional state. In most courses, students rely on the subjective ordering of material by the instructor. If students are unable to get a unified picture of the course, the material may become static. Concept maps allow the students to make their own adaptations to the course structure.

Currently, these maps are being used by Prof. Harris Brotman in plant and animal genetics. Prof. Brotman describes the maps as being "like a road map. When you go from one place to another place you relate the meaning of your origin and destination. You may have to go through a number of other places to finally get to your ultimate destination. Each stop-over has a meaning."

What makes the concept maps effective is that they are based on students' past learning experiences. This helps the student relate to unfamiliar material. The maps bridge the gap between what is known about a subject and what is to be learned.

One problem found in traditional learning approaches is low retention of information. The need to memorize material usually means that facts have not been associated with concepts. Thus, the material is not truly being understood. Prof. Brotman feels that concept maps place more importance on long term retention of material. "I told my students that I'm holding them accountable not at the final exam but six months from now for how much genetics they've learned. Any student will know a lot at the final exam, but how much will they know six months after the course is over?"

Students seem to remember general ideas from a course but not facts. The maps support the use of general ideas in an active framework. According to Prof. Brotman, "It's to create a positive attitude on the part of the students. It's to let him into what we have already discovered in our fields."

The student can benefit from the professor's work since new information can be easily built into the maps. "I struggled to learn the concepts of genetics by putting facts together and relating concepts. I don't see why students have to go through the same struggle when I can give them the benefit of my own experience," said Prof. Brotman.

The strength of the maps is seen in the student's ability to change them around and possibly expand them. According to Prof. Brotman, "I don't have any set rules using the concept maps. The maps are very flexible. They can be shifted around. The lines can be changed depending upon your understanding of the map."

The maps help to equalize students' ability in a class. Prof. Brotman has found that, "if they didn't have the maps they'd be lost. The sharpest students would get it but the middle group wouldn't. With the maps most are able to understand the material."

The maps have aided students a great deal, particularly in handling such a rigorous course as genetics. One of the beauties of the maps is that they can be used in any area of study in both the sciences and humanities.

The need for improved and innovative teaching techniques can no longer be neglected. The development of the concept map represents some of the resourcefulness which is being activated to improve education in the College of Agriculture and Life Sciences. Hopefully, these new ideas should stimulate further development of teaching techniques that are more responsive to the student needs.
Students Evaluate Program
by JON LIEBERMAN ’76 and GAIL HENDERSON ’75

It was 1968, 1969, 1970. Campuses were in revolt over political structures, but calls also were heard for changes in the university system itself. The rhetoric is old hat by now, but at that time, “relevance, innovation, and student input” were the rallying points of campus activities.

Calm seems to have descended upon the campus population these days - protests are few and far between, libraries are full, fraternity and sorority life has been revived. While radicalism and overt protest have become things of the past, a constant undercurrent of change is moving through the educational system of modern universities. Changes have occurred, but through the quiet and orderly workings of dedicated faculty and administrators.

Since students today are more docile and less likely to publicize their opinions, we've attempted to uncover their reactions to some of the innovative teaching methods that have been instituted at Cornell. One of the most widespread changes to occur has been the development and implementation of auto-tutorial courses. The basic theory behind these courses is that learning should be self-motivated and should allow the maximum amount of freedom for both teacher and student. Teachers have been relieved of their traditional lecturing duties by various media - tape recordings, slides, booklets, and movies. This creates a situation in which the students can take full advantage of teachers' time and knowledge as individual need arises.

What happens to this approach to learning when put into practice? What is the response of the student body to such innovative methods? Perhaps the best way to find the answers to these questions is to share some of the impressions of two Cornellians who have been both students and teaching assistants in auto-tutorial courses.

Roger Soll, ’75, has taken numerous auto-tutorial courses and was a TA in the recently instituted auto-tutorial alternative to freshman Biology. Mr. Soll was quick to point out that “the idea of AT in and of itself does not make a course good”. Jo Shapiro, ’76, has had similar experience and also holds the opinion that “the quality of these courses is not a function of AT theory but a function of who is teaching and how well the course is organized.” The most worthwhile course she ever took was auto-tutorial Biochemistry whereas the least valuable was first year Calculus. Ms. Shapiro attributes this difference to the degree of organization and of instructor availability. “The Biochemistry course had the best book and a good number of tests with well-timed deadlines which help you pace yourself,” Ms. Shapiro commented. Both she and Mr. Soll agree that another factor in the success of Biochemistry was the excellence of the teaching staff, in particular Joan Griffiths, who was “a good one-to-one teacher who used AT very well”.

The opposite end of the spectrum can be represented by the AT Calculus course. It lacked sufficient deadlines to help motivate the students to successfully complete the course requirements by way of a regular work schedule. Furthermore, there were too few instructors available to accommodate the questions and problems presented by such a large number of students.

Ms. Shapiro further suggested that organization is not the only key to the success of an auto-tutorial course and that it can become a hindrance if carried to excess. This danger was realized in auto-tutorial Physics “where the interactions between student and teacher became more bureaucratic than intellectual”.

The auto-tutorial freshman Biology course seems to be a much more successful realization of the goals of this innovative style of teaching. “It is important to note,” Ms. Shapiro stated, “that freshmen generally lack the necessary techniques of being a student to take advantage of the auto-tutorial system. However, an exception is the freshmen Biology course. A freshman course that relies on self-discipline is not good, but this course provides sufficient deadlines and constant feedback to the student from the instructional staff.” It is the constant participation required of students that makes for the success of this course and high enrollment figures attest to its popularity.

The importance of individual motivation becomes accentuated in these courses. “In courses such as freshman Biology and Biochemistry, the motivated person is golden,” Ms. Shapiro observed. “There are always experienced, intelligent people there to answer questions.” Along the same lines, Mr. Soll noted that “AT courses are tremendously beneficial for students with a weak background, provided they are willing to contribute the necessary energy. They can set their own pace, slow up if they have to, or stop and get help from an instructor. On the other hand, for the student with a strong background, it provides the flexibility needed to allow them to pursue more advanced interests.” For the above reasons, upper level courses such as Biochemistry may be more successful due to greater motivation and experience of the participants.

Innovative teaching extends beyond the auto-tutorial set-up into many other practices found on Cornell's campus today.
The College of Agriculture and Life Sciences Fund was a pioneer venture in New York State. Modeled partly after fund-raising programs of large mid-western land grant colleges, it’s still structurally parallel to the traditional programs of this kind existing in the endowed colleges at Cornell. Since its inception in 1969, many other State-supported institutions have followed the College’s example but the Cornell Ag College Fund is perhaps the most extensively developed and was “number one” last year in terms of monies acquired.

Until 1969, the College received gifts from private donors largely through a referral system from the Cornell University Development Office. Now, Laing Kennedy, assistant to the Dean and director of the Ag College Fund, works closely with the Development Office to develop private support for the College.

The purpose of the Fund is primarily two-fold. Monies are needed for scholarships and financial aid as well as for innovative teaching and special projects.

“We hope that we are student-oriented,” Kennedy says. “Tuition increases are leaping ahead of us all the time, and thus the Fund is successful because donors are responding to a real need.”

Gifts come to the College in many ways, from different sources, and in varying amounts. For instance, if a faculty member submits a request for funds for a new innovative program, Laing Kennedy, with the help of the Cornell Development Office, actively contacts past donors or others who might possibly be susceptible to the idea. Also, the Fund Office receives phone calls and letters from prospective donors who want to give money for specific and nonspecific purposes. An understanding is then reached between the donor and the College.

Donors are generally alumni, friends of the College, corporations, foundations, and organizations. Through their generosity, a permanent endowment fund has been built up and now totals over $600,000. Contributions, along with numbers of contributors, has steadily increased annually.

Money received by the College falls into four general categories, according to amount and to whether the gift has been given for a broad (general) or for a specific purpose. Contributions under $5,000 made with no restrictions as to use are lumped together. The interest from this permanent endowment is used for innovative teaching programs and for scholarships. More funds are being added to this sum each year, the total now being close to $150,000.

Larger endowments, the sum of which is now approaching $500,000, establish named endowed scholarships. The majority of these, like the scholarships derived from the permanent endowment, go to students who show financial need and scholastic ability. Named endowed scholarships are awarded also on the basis of any stipulations or restrictions that the donor chooses to place on the gift. In a third form of gift, about $42,000 is received annually from large corporations and organizations. These grants are completely parcelled out in the form of scholarships.

A last type of gift is expressly for the purpose of special projects in the Ag College. These gifts can be of a monetary nature, but largely consist of donations of a material nature which are specifically donated for use in a specified department at the College.

A special advisory committee has been set up to review monies allotted for innovative teaching and other special projects which come largely from the permanent (general) endowment fund. The committee, which is comprised of faculty, students, and a representative of each of the donor categories, meets twice a year for two-day sessions. The committee reviews any physical innovative additions to the College and discusses the policy and future direction of fund-raising at Cornell Ag College.

Feedback to donors is paid much attention. Students receiving named endowed scholarships are encouraged to write letters to their specific donor. Donors of smaller gifts also receive letters of gratitude from student scholarship recipients. The Fund Office has also set up the V.I.P. mailing program: donors receive progress reports four times yearly, thus being kept informed about how their gifts are being utilized. Indirectly, the feedback is from students themselves involved in the innovative teaching programs, via questionnaires and evaluations transmitted through the faculty member to the Fund Office.

Laing Kennedy is optimistic about the further success of the Ag College Fund. “People are aware we’re here now,” he said. The Fund has begun to receive bequests now as alumni and friends of the College put the Cornell Ag College in their wills. In fact, Cornell is capable of offering legal advice to anyone who wishes to bequeath money to the College. The new concept of private support for a public institution has turned out to be a working reality.
William Teich Greene ’74, is presently working to get an M.Sc.Y. and D.V.M. in five years at Douville, St. Hyacinthe, Quebec, Canada. He reports that he is more a Cornellian than a French-Canadian.

R. L. Rossman ’09, reminisces about how he combined drill and track. He reports that he missed no drills except the last one. He had been granted Leave of Absence due to the Princeton dual meet and was rewarded with a final passing grade of 60 when most people got 90. His Sr. year he missed winning a letter since he tied in winning the high jump in the Princeton meet. He did earn a letter in his Soph. and Junior years.

Homer B. Neville ’18, celebrated his 81st birthday on January 26, 1975. Over the years he has overcome many problems and accomplished projects in the field of Agriculture. Domenick R. Ciccone ’72, was recently appointed Assistant Refuge Manager, Target Rock National Wildlife Refuge, Huntington, New York. Previously, he worked as Recreation Specialist at Blackwater National Wildlife Refuge and has been Assistant Refuge Manager at Blackwater National Wildlife Refuge since December 1973. He will now make his home on the Target Rock National Wildlife Refuge.

USSR Agriculturists
Study College Methods

Three agricultural administrators of the Soviet Union visited Cornell University recently in the first of several visits by Russian agriculturists planned in 1975. Traveling under the auspices of the U.S.-USSR Agreement on Cooperation in the Field of Agriculture which was signed in Washington in 1973, the three member team talked to faculty members and administrators of the N.Y. State College of Agriculture and Life Sciences.

The College’s office of International Agriculture, directed by Prof. Edwin B. Oyer, arranged the schedule for the visitors. They asked to visit the College to learn how agricultural research is organized and conducted, and how the research information is transmitted to New York farmers through Cooperative Extension programs.

Ag Engineering Service Started

The 12 Cooperative Extension directors of the land-grant colleges and universities in the Northeast have jointly established a regional agricultural engineering service at Cornell University.

To be known as the “Northeast Regional Agricultural Engineering Service” (NRAES), the organization has its headquarters in the Department of Agricultural Engineering at the N.Y. State College of Agriculture and Life Sciences.

At the recent organizational meeting, Prof. Everett D. Markwardt, extension agricultural engineer at the College, was elected chairman of the Executive Committee which includes representatives from Pennsylvania and Massachusetts. David C. Call, director of Cooperative Extension at Cornell, serves as administrative advisor to the group.

Markwardt also will serve as chairman of the full committee which consists of 12 extension agricultural engineers representing the northeastern states, and two representing the Agricultural Research Service and the Cooperative Extension Service of the U.S. Department of Agriculture.

The NRAES was organized to facilitate development and dissemination of a wide range of engineering educational materials such as design data, plans, and extension publications for use by Cooperative Extension field staff in working with farm and non-farm people throughout the Northeast.

College Cooperates
On Falcon Project

Cornell University, the National Audubon Society, the U.S. Department of the Interior, the U.S. Army Materiel Command, and the Colorado State Division of Wildlife have begun a cooperative project to build up populations of the peregrine falcon in selected sites across the United States.

This effort marks the latest phase in Cornell’s long-term goal to restock these valued birds into areas where they have disappeared or dwindled.

“Now that the Cornell falcon program has completed its second successful season of breeding peregrines in captivity, the time is right to begin planning for the release of these birds,” said Prof. Tom Cade, of the N.Y. State College of Agriculture and Life Sciences.

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Volunteer?  ..Why Not?

Ralph Waldo Emerson once said, “It is one of the most beautiful compensations of this life that no one can sincerely try to help another without helping himself.”

by BENEDICT DREW ’75

When students first enter a major university like Cornell, one of their first worries is finding enough time in the day to do everything that must be done. Fatigued by the bureaucratic details of orientation week and with warnings of impending work loads fresh in their minds, first-year students are concerned over the fact that 24 hours may not be enough time to accomplish everything a day at college requires. In the beginning, there is a fear among students that attending college is going to take every moment of the next four years of their lives. After a few months of settling down, however, most students at Cornell find that they have a fair amount of spare time on their hands to devote to the activities which the campus and the surrounding community of Ithaca have to offer. Numerous students take advantage of the various clubs at Cornell. Some participate in intramural and intercollegiate sports, while still others choose to explore the beautiful countryside around the campus.

Another activity that many individuals devote their spare time to is volunteering their time and ability to help other people. Their work might involve being companions to ward patients at Willard State Hospital, tutoring Ithaca school children, taking senior citizens on outings or even guiding small groups of elementary school children in gardening activities at the Cornell Plantations. The people doing these things are the many Cornell students who are serving as volunteers around the Ithaca area.

Like many other areas in the country, Tompkins County has a great need for volunteers to work with people in the community who are dependent on other individuals to make their lives a little happier. Cornell University students have always been a main source of volunteers in the Ithaca community, and the need for student volunteers is increasing as volunteer programs are expanded.

When a student considers working as a volunteer for the first time, a number of questions usually arise. Probably the most important question is why should I devote some of my free time to being a volunteer? Although the answer to this question is best found on an individual basis in the potential volunteer’s own mind, there are several important advantages about volunteer work that should be remembered.

A final advantage of a student devoting her free time to volunteer work is the chance that she will come in contact with people whom she would not ordinarily see.
Working as a volunteer is just a chance to reciprocate to somebody a little friendship, something people have been giving you throughout your entire life.

Working as a volunteer can give an individual the opportunity for growth as a human being through the relationship with the people he is helping. In talking to many student volunteers in different programs, I found that most of them listed the satisfaction that they receive from helping other people as a very meaningful part of their college life at Cornell.

A second advantage to volunteer work is the opportunity to gain experience in a possible career interest. Many volunteer positions provide a chance for a student to work at a job which he might later choose as an occupation. In fact, many courses at Cornell require some volunteer experience in practical areas related to the material in the course.

A final advantage to a student devoting his free time to volunteer work is the chance that he will come in contact with people who he would not ordinarily see. Through personal participation in the Big Brother-Big Sister Program, I had the opportunity to interact with a little brother who was much younger than I, and whose family background was far removed from my own. It was refreshing to be away from the atmosphere of a college campus for a change.

If a student feels ready to become a volunteer, the next question to be answered is whom do I call to find out about how I can help? In Tompkins County almost all volunteer work is managed cooperatively by CIVITAS and the Voluntary Action Center for Tompkins County. These two organizations work together as a social referral agency for anyone interested in becoming a volunteer.

CIVITAS (Cornell-Ithaca Volunteers In Training and Service) was started in 1966 as an offshoot of the Student Service Program. This program which operated through Cornell United Religious Work was formed to set up volunteer activities involving Cornell students. CIVITAS places over 500 volunteers annually in a variety of activities ranging from tutoring to the operation of a day care center.

The Voluntary Action Center was started as a county agency in June 1972. It has grown from providing 502 volunteers in its first year to providing over 1,200 this year. The VAC provides a constant listing of openings and descriptions for volunteer work from over 90 organizations. It is now privately funded through foundations and member contributions, but there is hope that it will be a United Way Member by 1976.

Ms. Lois King, the director of CIVITAS, separates the role that these two organizations play in helping volunteers into two parts. The first is to provide a prospective volunteer with specific information on where his help is needed. CIVITAS and the VAC are in continuous contact with organizations who need volunteer help. When a student contacts CIVITAS Ms. King tries to match up the student with the most desirable volunteer opportunity for him. The Volunteer is told exactly what will be expected of him in terms of the time and any special skills which he might need. “Anyone that wants to do something, can,” is the way Ms. Jan Zahler, coordinator of the VAC, summed up the work of the VAC and CIVITAS. “You can always fit the need of the organization to a capable volunteer, and our volunteers range in age from seven to 81.”

The second function of CIVITAS and the VAC is to protect the agencies they work with from the calls of people who want to volunteer, but who have no idea of how to go about it. CIVITAS and the VAC handle any questions which volunteers might have, and they facilitate the whole process of getting the right people for the right volunteer opportunities. They also work with the volunteer once he is doing a service in case some difficulty arises which their personnel can help solve.

If a student wants to be a volunteer, his best resort is to phone CIVITAS or the VAC directly and set up an appointment to meet with their personnel and discuss possible needs in the community. He can also check the local media for the volunteer listings furnished by CIVITAS and the VAC. They publish weekly listings in six newspapers including the Ithaca Journal, Cornell Daily Sun, and the Cornell Chronicle. They also broadcast on WTKO every morning and on WHCU in the late afternoon, as well as preparing some tape programs for periodic broadcast. By listing the current needs for volunteers in the local media, CIVITAS and the VAC hope that potential volunteers in the community will find a position where they would want to help. So far the use of local media has been fairly successful in reaching good resource people for the needs of the organizations in the area. Still, there are many needs for volunteers which are not being filled.

The final question in the minds of most potential volunteers is what can I hope to gain as a person by doing volunteer work? Although I have already mentioned some of the more tangible gains volunteer work offers, my experience as a Big Brother has showed me just how satisfying working as a volunteer can be. To sum it all up, it is best to say that working as a volunteer is just a chance to reciprocate to somebody a little friendship, something people have been giving you throughout your entire life. The need for volunteers in Ithaca is still strong, and all students at Cornell owe it to themselves to look into the volunteer programs.
Between the end of high school and the first day of college, incoming freshmen begin to worry and wonder about their future alma mater. The prospect of attending a large institution like Cornell bewilders most of them and frightens more than a few. Upperclassmen and even second-semester freshmen quickly forget the months of adjustment they had to make before Cornell meant the security of daily routine and familiar faces.

To ease the transition, the Office of the Dean of Students offers incoming freshmen a chance to get inside information on college life in a way they’re guaranteed to remember for a long, long time. The program, called “Wilderness Reflections,” consists of about 50 different trips on which nearly 300 new students can spend between a week and 12 days backpacking, bicycling, or canoeing through the wilderness. Each coed group of up to ten students is led by two trained upperclassmen. Their purpose is twofold: to guide the trip, and to answer questions about Cornell.

The length, place, and structure of each trip is left up to the guides. Nearly half the trips take place in upstate New York, but some excursions may range from Canada to the Carolinas and as far west as Wyoming and Colorado. Most of them end just before the last week in August so that freshmen can join Cornell’s traditional orientation exercises on campus.

It’s up to the freshmen to get themselves to the trip’s rendezvous point, but after that the group is on its own. They travel by day and camp at night, rarely seeing another human being during the trip.

Trips are not strenuous, nor are they rigidly planned. Guides set easy goals with regard to the distance that may be covered each day, allowing plenty of time for leisurely side trips and unplanned activities. It also gives the future freshmen a chance to pepper their guides with questions about Cornell. The outdoor surroundings and the sense of isolation during the trip make for close communication between members of the group. Personal, social, and academic topics are often discussed as members begin to open up about themselves. The guides point out interesting aspects of nature as they hike, bike, or canoe along.

Naturally, the trips do not always run smoothly. Guides occasionally face the problem of the nightly campusouts acquiring a party atmosphere. One trip ran into trouble when a freshman girl developed a crush on the male guide. Group leaders try to deal with situations like these by involving the entire group in open discussions on their problems. The freshmen soon realize that strain on the group makes for an unpleasant outing and endangers the purpose of the trip.

Wilderness Reflections was brought to Cornell four years ago by Dave Henderson, the Assistant Dean of Students. The program was borrowed and modified from similar setups at some 20 other schools. Its purpose is to clear up misconceptions about Cornell, and to provide incoming students with friends. According to Ray Uloth, Assistant Dean of Students and advisor to the program, a recent survey showed that over 90 per cent of the participants did indeed remain friends with those they met on the trip.

Soon after high school seniors are accepted by Cornell, they receive a list describing each trip and the guides who lead it. They then choose the trips they are most interested in.

Trips are not subsidized by the university. Their entire cost is paid by the freshmen, who were charged between $53 for a one-week hike through the White Mountains in New England to $121 for eleven days of canoeing in Canada’s Algonquin Park last summer. Guides get an honorarium of $1.50 per person per day; the rest of the money goes for food, equipment and transportation. The guides are chosen by a subcommittee of the Student Steering Committee. Their only qualification, besides a love of nature, is that they be upperclassmen or former Cornell students.

Wilderness Reflections is more than an unusual orientation program. It is a style of living that brings out the hidden side of its participants and creates a memorable preview of futures at Cornell University.
From apples to engineering, from Bangladesh to the West Indies, from frisbee to parachuting, and from overeating to yoga, life at Cornell is enriched by a diversity of student clubs and organizations that service the social, cultural, educational, and special interest needs of its students. Every year over 250 student clubs and organizations are active at Cornell, reflecting every imaginable student interest. Some organizations provide a forum for the exchange of ideas among students of similar or different backgrounds. Others bring together students who share similar hobbies and interests. Despite their sheer numbers, student participation is the key element in measuring the success of the student activities program.

Reasons for being part of a club may vary with the individual member. Some students see membership as a chance to meet other people in a less formal atmosphere than academics normally allow. Other students seek experiences not normally found in the classroom, such as bellydancing or jumping out of airplanes. Relevancy and activism are the chief motivations for many students when they join organizations like the Sierra Club or the Ithaca Friends of the Farmworkers. Because of their independence, clubs also foster self-expression. The students are given a chance to run a program the way they think is best.

Although student organizations are traditionally thought of as extracurricular activities, many of these groups closely supplement academic pursuits. A number of organizations like the American Association of Textile Management and the Black Electrical Engineering Group are spinoffs of academic departments. The hobby and special interest clubs are truly extracurricular activities, but even these have their educational aspects. In the College of Agriculture and Life Sciences there are several groups like the Agronomy Club, Pomology Club, and the Pre-Vet Society where one can develop a new hobby or pursue a scholastic interest.

The history of clubs at Cornell goes back to the founding itself. From the first year of existence, class societies and banqueting clubs were formed. Societies of debate, oratory, and literature were especially popular in the very early days. As early as 1875 musical interest and drama clubs began to flourish. The Glee and Mandolin Clubs were composed of male students who serenaded the young ladies minstrel style. The Cornell Savage Club began as an early drama organization which had as one of its duties to entertain prominent actors appearing at the local theaters. In 1876 the earliest service society, the Student Guild, was founded. This group relied on donations from the well-to-do students to help the poorer students during times of personal emergency and distress.

In the late 19th century there was a ferment of student group activity. Social clubs like Book and Brunch and the Sunday Night Club were popular. Early honorary societies like the Sphinx Head and Quill and Dagger were the most powerful groups on campus, exercising influence over student affairs and student publications. The turn of the century marked the period when a number of secret societies were founded. These societies were the forerunners of the present fraternity system. At the time the Cornell University Christian Association was the largest student organization.

Similar to the international groups of today were the sectional clubs of the 1920's. These included the Southerners, the Dixie Club, the Rocky Mountain Club, the Senators (from Washington, D.C.), Scalp & Blade (from Buffalo), and Mabrique (a composite name for those from Manhattan, Brooklyn, the Bronx, and Queens). Athletics were also a focal point of club interest in the early years. Some of the more important clubs included basketball, lawn-tennis, hockey, and even cricket.

The diversity of student organizations at Cornell is due to a number of factors. Part of it is the result of history. It was decided early on that there would be funding for student activities. This expectation of money caused a
growth in club organization. The diversity of the students who come to Cornell enable a wide variety of clubs to exist and flourish. Despite this diversity, most of the clubs can fit into seven or eight broad categories of activities.

For those interested in music there are a number of clubs and musical groups catering to all types of music. For the traditionalists there are groups like the Altenberg Chamber Orchestra and the Highland Piping Society. More modern music is enjoyed by the Folk Song Club or Cornell Jazz Society. Vocal groups include Cayuga's Waiters (for men), and the Notables (for women).

For those bent on more serious endeavors there are the numerous political and social-action organizations. These clubs represent the full range of the political spectrum. On successive evenings the Conservative Club and the Revolutionary Student Brigade may meet. The rhetoric of the Young Socialist Alliance is countered by the ideas of the Radicals For Capitalism. Most of these organizations attract a very select type of student with a particular viewpoint on current affairs. Some of the clubs are content to seclude themselves and foster internal discussions, while others feel their mission is to educate the public.

If one is religiously inclined it is usually possible to find a society of fellow believers. At one extreme is the Atheists’ Club, while at the other pole stands the Cornell Christian Fellowship. There are societies for Muslims and Jews and Christian Scientists. All these groups seek to give their participants a fuller meaning to life.

Some students are attracted to the idea of helping other people, so they join a service organization. Some of the services these groups provide for other students include personal, academic, and drug counseling, and even transportation for the handicapped. Other organizations like Storefront, Civitas, and the Public Interest Research Group (PIRG) stress public service to the community.

Just to get away from the books and do something different is reason enough for some students to participate in the many recreational clubs on campus. These types of activities range from the drinking societies to judo clubs. For those interested in more leisurely and sedate activities there are organizations for players of chess, monopoly, or tiddlywinks. Students of more adventurous spirit are members of the Outing, Soaring, or Sport Parachuting Clubs. All types of recreational activities serve a similar purpose in providing the student with a refreshing outlet to the drudgery of academic affairs.

Because of the varied hobbies and interests of Cornell students, special interest organizations abound. Some of the more varied of these activities include Overeaters Anonymous, the Natural Foods Club, the Poets' Union, the Bizarre Underground Math Society, the Baker Street Underground, and the Sports Car Club. These groups bring together students of very similar and specialized interests. They also provide a place where a student can go to widen and develop new interests.

Students from all over the world attend Cornell. Numerous countries represented at Cornell are also represented by national clubs made up of native students. These groups serve their native students by providing a place where it is more comfortable to get to know people with similar backgrounds. The interaction between these organizations and the whole campus brings about a great change of culture which enlarges the environment of the entire university community.

There is also a group of clubs bearing some relationship to the Ag College. For hardcore Aggies there are the Future Farmers of America and the Cornell Grange. The Entomology Club and the Jordan Society serve those students who are more biologically oriented. Groups associated with academic departments include the Dairy Science and Food Science clubs.

The Office of Student Activities offers numerous services for student groups, including the preparation of a speaker's bureau booklet that lists faculty and staff willing to speak to groups, and the publication of a reference manual. This manual provides a list of university facilities and how to book them, where to go for expertise, and how to clear a path through all types of red tape. They also can provide a list of all the registered student organizations.

Probably the most important aspect of the relationship between the students and the wealth of activities is the time factor. Many students complain that they are busy enough as it is without a lot of meetings to attend. Freshmen and upperclassmen alike are staggered by the amount of time consumed by studies. However, one informal study observed the freshmen that were the best adjusted were the ones who belonged to at least one student group.

The diversity of student organizations is one of the things that creates the unique Cornell experience. The value of this participation cannot be measured but its true meaning is caught by a paraphrase from Mark Twain: “I never let the classroom get in the way of my education.”

... to folk music clubs, Cornell has a diversity of activities.
It is said that the majority of one's education at College occurs outside of the classroom. If you are at all skeptical of this belief, it might be profitable for you to take some time out from your studies and take a good look at Cornell. You live in a rather unique heterogeneous community where individual group interests help mold the whole - this is the Cornell Experience.
Cornell Experience only begins in the classroom. It's outside of formalized education that one finds the bulk of the Cornell Experience. It is a Sunday morning chimes recital. It is a Spring softball game. It's stopping a slap to keep your team in intramural contention. It is a winter's evening poetry reading. It is cheering the Red on to a come-from-behind in football. It is the tall race down Fall Creek in "anything but a boat." Watching, singing, listening, participating and enjoying, most of all it is learning. All these things lead to a personal fulfillment – maybe that's what the Cornell experience is... personal... fulfillment.
The first experience most new students have with Student Agencies is the rental of one of their refrigerators. Although not very big, these refrigerators can hold a surprising amount when forced. Thus the pattern is repeated year after year: no sooner have you arrived in your dorm than the idea of renting one of these four cubic foot, brown boxes seems the thing to do. So off to Student Agencies you go with thoughts of all the money you’re going to save by eating in your room. As a sophomore you no longer need to rent a refrigerator because you are living in a Collegetown apartment that has one. But you have laundry to do and Student Agencies has a laundromat. In your junior year you need to have a resume copied which Student Agencies also does. So by the time you are a senior you aren’t a bit surprised that the cap and gown worn for graduation came from Student Agencies. It is in this way that Student Agencies serves you from matriculation to graduation.

Student Agencies is a corporation designed to provide services for the Cornell Student. Student Agencies is not only responsible for the refrigerator rental service and Collegetown laundromat, but also the dormitory linen service, computer services, sale of pennants and novelties at football games, plus many more services.

Student Agencies on College Avenue offers a diversity of services.

Student agencies acts as an umbrella corporation for all the smaller business service units. Many of the services such as the Birthday Agency, which makes and delivers birthday cakes to students, were started by students. Student Agencies functions as a stabilizing factor to get the business going.

Student Agencies has been in operation for over 80 years. Throughout that time its objectives, according to Ed Clement, Student Agencies consultant, have remained the same. Its main objective is to provide services for the Cornell community. Their services are pioneered and managed entirely by students within the framework of the Student Agencies Corporation. This relates to the other objectives of giving financial aid to students through employment and providing realistic business experience.

Student Agencies is run entirely independent of Cornell. Yet they maintain a close working relationship with the University. Student Agencies is structured in two parts. The first is Student Agencies Inc. which oversees the bookkeeping and financing of the separate services. This part is run by student officers and a board of directors made up of alumni, University people, local businessmen, and student members. The foundation is the parent company of the corporation and is comprised of 60 members who act as a stabilizing instrument.

The service agencies themselves are operated by a student manager who is in charge of hiring all personnel, usually students. The manager is also in charge of the day to day bookkeeping and buying. Managers and corporate officers are elected for one year terms and receive a percentage of the service’s profits.

Another objective of Student Agencies is to give students practical business experience. This has been most valuable to Doug Riley, ’76, who is the manager of the Student Agencies Laundromat. Doug started with Student Agencies as a freshman in order to get a part time job. One year ago he was elected as manager of the laundromat and he is now the president of the corporation. His introduction into the practical side of business prompted him to change his major from landscape architecture to agricultural economics and business management.

In his job as manager, Doug is responsible for the selection of the all-student personnel. He oversees the maintenance of the property and the machines as well as keeping track of all supplies and reordering from salesmen when necessary. According to Doug, many courses try to teach business, but in the real business world things do not happen as they do in a textbook. Instead of applying formulas, business is just common sense.
Beyond Academics, The College Cares
by ANN KASTEN '75

In 1975-76, the College of Agriculture and Life Sciences will greet approximately 550 new freshmen and 350 transfer students in the fall, and about 100 to 150 transfers in the spring. Within the college, there are 2,800 undergraduate students and 900 graduate students interspersed among its nine major divisions. With such a vast number of students, much concern is placed upon the student advising programs that are available in the College. One common and very important goal of these programs is to make the college less bureaucratic by creating a more personal atmosphere in a huge university.

The majority of student advising is done through the Faculty Advising System. All freshmen and transfer students are assigned a faculty advisor during the summer before they begin their instruction at Cornell. The choice of faculty member for each student is determined by their area(s) of interest as expressed in their application for admission. The student's faculty advisor serves a variety of purposes. A few of the main objectives of the faculty advisor is to help the student in choosing his course work each semester, to aid the student in determining his main areas of interest, and to help the student overcome any obstacles during his stay at the university, including personal as well as academic problems.

Dr. Earl Brown, Associate Director of Resident Instruction within the College of Agriculture and Life Sciences feels that the Faculty Advising System has so far proven to be an extremely successful and competent arrangement, yet he is continually seeking innovative methods in helping students get the maximum benefit from their years at Cornell. He is especially pleased with the Cornell University Announcement catalogue for the College of Agriculture and Life Sciences. The purpose of this brochure is to provide prospective students with a summarized view of the objectives and programs of the college, while attempting to answer any anticipated questions they might have. Dr. Brown hopes to have a similar catalogue for each of the nine divisions within the Agriculture College, so that each department can elaborate upon the programs they offer in order to provide a means of easy access to important information for those applying to Cornell as well as for those already attending Cornell. The department of Agricultural and Biological Engineering as well as Animal Science already have such a catalogue published. Announcement catalogues for both the departments of Plant Science and Biological Science are under way.

Creating a greater array of publications within the college is just one of many proposals that Dr. Brown feels will enhance the college's student advising programs. He feels that the College should make a concentrated effort to demonstrate that it regards students as very important people.

In order to produce a more personal environment, Dr. Brown would like to see each division operate as a "mini college". The chairman of each division should be recognized as a "master advisor", and each student should know this person as well as his own advisor. The student should be able to attain most, if not all, of his advising needs from first the faculty advisor, second the master advisor, and third from other areas that either of these two people feel might aid the student in providing information, such as the Financial Aid Office. If the student feels that his needs have not been met or if he has been receiving a complete runaround. Dr. Brown invites these students to come and visit his office, yet he feels that the pathway described above should easily be able to handle 99 percent of any problems that arise.

Dr. Donald C. Burgett, the College Registrar, helps in time of academic troubles.
If a student has reached the point where he finds himself in academic trouble, his problems are discussed with Dr. Donald Burgett, the College Registrar. Dr. Burgett also serves the function of the college’s Dean of Students by dealing with students who are faced with a variety of difficulties.

Dr. Brown would also like to see some type of research room in each division chairman’s office manned with student advisors from the division. Each of these rooms should contain course outlines for each course, old final exams for each course, and student evaluations of courses, as well as other pertinent information. These rooms would be mini department libraries. Besides working at the departmental level, Dr. Brown suggests other advising methods that may be just as effective. One is to set up V.I.P. Information Rooms in the libraries. Another is to set up information booths on each quad during orientation in the fall. These can be operated by students, faculty, and college administrators. A third possibility is developing a Hot Line, and a fourth is employing student line helpers and making more visible signs whenever lines are anticipated such as during registration. Dr. Brown hopes that some of these new ideas will soon be implemented.

Besides the Faculty Advising System and the advising proposals discussed so far, there are a few specific advising centers which are already in progress. One of these is the Biological Center, which was designed to serve the 1,600 biology majors in both the College of Arts and Sciences, and Agriculture and Life Sciences. The new Biological Sciences Center was started in the spring of 1975 in hopes of creating a closer relationship between faculty and students. The center is manned with student advisors from the College of Agriculture, and ten from the College of Arts and Sciences. The Biology Center is split level and is very comfortably furnished. The upstairs consists of one large reception area, with private advising offices on the right and study cubicles on the left. The “Morgue” downstairs has study cubicles as well and another reception area. The center has received much acclaim from the biology majors who frequently use their facilities. According to Fran Rosenberg, the student advising coordinator for the College of Agriculture, there is an average of five students per hour who drop by to visit the biology student advisors. It is open from 10 a.m. to 5 p.m. and from 7 p.m. to 10 p.m. Many course review sessions are periodically held in the reception rooms. The center emits a congenial atmosphere for students, where coffee, tea, and cocoa are available.

Another very successful advising service is the EOP, COSEP, Student Advising Office for minority students located in Caldwell Hall. This office is always manned with student advisors who welcome students for any type of counseling they might need. They provide a good insight to courses by supplying evaluations, old notes, and old exams. The student advisors conduct review sessions as well. This office seems very well organized due to the genuine interest that the advisors have in students who use their facilities. The goal of the student advising staff is to overcome any obstacles that new students may be faced with.

The final area of student advising to be discussed is one that goes beyond direct academics. This is the career Development Program, coordinated by Mr. Allen Perry, which deals with advising students in their occupational goals. The goal of this office is to try to facilitate a student’s exploration of career alternatives by focusing on first-hand experiences as reference points. This office supplies a browsing library which contains a great selection of job information. This office also helps students to locate summer jobs, part-time work programs, as well as fulltime postgraduate careers. Since Mr. Perry realizes that it is difficult to come in contact with all the students in need of their services, they develop information packets which contain much such information as advice on writing a resume, how to pursue a job opportunity, and a list of what interviews will be held on campus for job openings. One very successful program initiated by this office is the Student-Alumni Contact Program which gives students the opportunity to spend a week or two working with an alumnus of the college who is professionally employed in the student’s area of interest.

Mr. Perry hopes to fortify the bonds between his office and faculty advisors. Often, faculty advisors recommend students to the Career Placement Office, and this office often sends students to specific faculty advisors for further first-hand information. The philosophy of Mr. Perry’s office is to have a minimum of structure in a flexible program so as to be able to help students from a number of different angles, yet with enough structure to guide students or refer students properly. The Career Office has enough contacts to meet most of the requests of students.

It seems that a great many people within the College of Agriculture and Life Sciences are quite concerned with aiding students with any questions or problems they might have. The programs that are now in existence are doing quite well, but with a growing university there is always room for improvements and change. In the past, agriculture students have always been able to get help, but the goal of these advising programs is to make it easier for students to receive advice by cutting down the amount of red tape. It seems that an atmosphere of concern prevails throughout the College of Agriculture and Life Sciences.
Student-Alumni Contact Program:
A Look Into The Real World
by LIZ CARTER '76

If you have doubts about your vocational plans for the future, the College of Agriculture and Life Science's Student and Alumni Office is ready to assist you. Even if you are sure of your plans for the future, wouldn't it be ideal to gain first-hand work experience in the field of your choice? All that's required is to fill out an application: the Student and Alumni Office in Roberts Hall does the rest.

This unique opportunity is known as the Student-Alumni Contact Program. What the program does is match up Cornellians with alumni and friends of the college who are employed in the student's field of interest. Then, for a week during Christmas vacation or during Spring or Summer break, a student goes to work with an alumnus. The student is given a chance not only to observe but also participate in the day-to-day activities of the job. Allen Perry, the coordinator of the Career Development Program in charge of the Student-Alumni Contact Program notes two reasons for the importance of such an experience. First is the rare educational opportunity to increase one's awareness about their chosen field by becoming involved in the work world on a trial, pressure-free basis. The second is the ability for a student and an alumnus to establish a close rapport.

The students who have been involved in the program agree whole-heartedly with Mr. Perry's sentiments, having discovered the type of training and the precise education that their intended fields require. For example, Dr. Peter Duncan, Coordinator of the Birth Defects Center of the Westchester County Medical Center advised Carol Thayer, '77, to attend medical school in order to advance in the field of genetic counseling. Carol was grateful for his advice because she was unsure what training was necessary for genetic counseling, and was curious if a masters' degree was sufficient. Tom Davis, '76, a Cooperative Extension major, was unsure of what to specialize in before he worked with Cooperative Extension of Nassau County. Tom, who ran a recreation program last Christmas vacation, said he gained insight into the direction his studies must take in the future.

Overwhelmingly, the students who participate in the program emphasized the helpfulness and friendliness of their sponsors. Many, like Michael Sweeney, '76, plan to maintain correspondence with their sponsors in the future. Michael is luckier that most; as a result of his contact experience, he was offered a summer job by his sponsor, Gary King, regional Vice President of a marketing division of the Jewel Company, a diversified retailer. What is even more promising to Michael, an agricultural economics major, is that the firm views its summer jobs as a trial period for the selection of future employees.

Overall, students' feelings about the contact program have been exceptionally positive. Even one student who, much to his chagrin, discovered that the type of job he was looking for just does not exist, remains pleased with the program. He now has time to re-evaluate his future educational and vocational plans.

Alumni reaction to the program has also been extremely favorable. John M. Coulter, Vice-president of Marsteller Incorporated, an advertising, marketing research, and sales promotion corporation, mentioned that at first he was reluctant to participate in the program last Christmas vacation but that he, as well as his colleagues, found Arlene Brimer, '76, and Marie McCullough, '76, to be "delightful." He added, "the program was a complete success from our point of view and we are ready to cooperate on next year's program right now." David Tetor, '65, a Dutchess County Cooperative Extension agent, noted that he not only found the contact experience with Linda Grunthaner, '76, extremely enjoyable, but that he as well as the Extension Agency had gained from it. He requested that Allen Perry keep him in mind for this year's program.

The great success of the two-year old Student-Alumni Contact Program has created a problem. The number of student applicants jumped from 75 two years ago to 150 last year and the number is expected to increase even more this year. Since all Ag students are urged to get involved in the program, its continued success depends on the willingness of more alumni and friends of Cornell to act as sponsors of this worthwhile learning experience. At the present time, Mr. Perry recruits sponsors through the Board of Directors, the core of the Alumni Association. He notes that the message is then communicated along the "grapevine." The faculty and other employees of Cornell are also contacted and asked for their assistance, or their suggestions of acquaintances who might want to participate. Mr. Perry stresses that he is interested in any leads, and that any person should feel free to contact him if they are interested in the program.

Hopefully more sponsors will volunteer for the program and the Student-Alumni Contact Program will be able to continue its excellent job of enriching and expanding the education of Ag students while allowing alumni and friends to strengthen their ties to Cornell.

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A Personal Opinion Of
The Cornell Ambassadors
by STEVE LEMMEY '75

The Cornell Ambassadors are a group of students actively seeking to help maintain and improve Cornell's relationship with its alumni and the outside world. Serving as one possible contact between alumni and the University, the Ambassadors seek to participate in many alumni activities. In the past few years they have become involved in telephone fund raising drives sponsored by local chapters of the Cornell Club. Each year many of the Ambassadors serve as hosts for alumni receptions held during homecoming. The Ambassadors are one of the University's active links with the past, but they are also very much concerned with Cornell's future. This is why the Ambassadors make visits to so many different high schools; they want to acquaint the high school students with the various aspects of Cornell life. I find this to be the most personally rewarding of all the activities I, as a Cornell Ambassador, have experienced.

When the alarm first went off at 6:45 in the morning I was certain that it was broken. Five minutes later, when the second alarm went off, I remembered that I had to reach the Cornell campus by 7:45. It was dark and rainy on this late winter morning when I arrived at the Alumni House on Thurston Avenue.

At 7:45 Brad Corbitt, the Regional Director of Alumni Affairs, arrived and was ready to go. Leslie Canfield, Ag '75, arrived shortly thereafter and we were off on a Cornell Ambassador's excursion.

A Homer High School Senior and Guidance Counselor speak with Leslie Canfield and Brad Corbitt (facing camera).

Along the way we picked Dick Church, an Admissions Director for the College of Agriculture. Leaving Freeville, our next stop was Cortland High School. Leslie, Brad, Dick and I were scheduled to speak to a small group of high school students who were hopeful of attending one of Cornell's seven undergraduate colleges.

Cortland High is a modern, well-maintained secondary school. Leslie spoke first to a handful of students telling them about the many enjoyable activities they might participate in while attending Cornell. Clubs, fraternities and sororities were discussed briefly.

I pointed out the wide variety of academic pursuits and extracurricular activities available to students at Cornell. Dick Church was able to answer several questions about admission requirements. Brad mentioned that for a university of its size Cornell has many small communities that enable students to feel a sense of belonging. Leslie and I both reassured the students that Cornell really could be a very friendly place.

One of the students wanted to know about her chances of getting into law school after attending Cornell. Another student posed several questions about the College of Veterinary Medicine. Dick Church answered each of these questions by mentioning the high level of competition for acceptance to graduate and professional schools.

From Cortland High School we went for a second cup of morning coffee before our arrival at nearby Homer High School. At Homer we talked to several students interested in studying biology. This group of high school juniors and seniors had an entire range of questions aimed specifically at Leslie and myself. How do I decide what courses to take? Can I change my major? How difficult is it to transfer from one college to another? Then there were a number of questions about the social life at Cornell and whether or not a freshman should live on campus. After almost an hour of thorough questioning we headed back to Ithaca.

Our visit to these two high schools is just one of the many types of activities in which the Cornell Ambassadors participate. It is possible for one to become an Ambassador since candidates are accepted from every college in the university. New members are actively sought each spring semester. For more information about the Cornell Ambassador program contact John V. Stone, '42, the program advisor, at the Cornell University Alumni House in Ithaca.
Nathaniel Owings, '27, has established an annual fellowship at the American Academy in Rome to be awarded to a member of the faculty of the College of Architecture, Art and Planning at Cornell starting with the 1976-77 academic year. The fellowship will make it possible for a faculty member to work at the academy in its programs in architecture, art, environmental design and landscape architecture.

Chester H. Freeman, '39, professor of communication arts in the College of Agricultural and Life Sciences, has been appointed chairman of the Department of Communication Arts for a three-year term. He will head the academic unit of the department which will include responsibilities for teaching, research, and extension programs in the communication field.

Donald F. Sola, '52 (Ph.D.), an authority on the South American Indian language, Quechua, has been elected professor of modern languages and linguistics in the College of Arts and Sciences. A member of the Department of Modern Languages and Linguistics since 1958, his Quechua teaching materials are the standard texts in the field. The language is spoken by millions of Indians in Peru, Bolivia and Ecuador.

Lee Leonard, '63, Ohio statehouse reporter, has been elected president of the Ohio Legislative Correspondents Association. Leonard was a graduate of the Department of Communication Arts.

The Management Program was established at Cornell in 1958 under Earle's direction and in cooperation with the National Association of Food Chains to give talented people in the industry opportunities for development.

Wildflower Garden Dedicated

Cornell University Plantations dedicated a wildflower garden to Muriel B. Mundy and her husband, Floyd W. Mundy Jr., '28, of Scarsdale, N.Y. The six and a half acre garden, located in the Cornell Plantations, was named The Mundy Wildflower Garden. University President Dale R. Corson accepted the gift of the garden from the Mundy's on behalf of Cornell.

"The garden is an outdoor laboratory in which students can examine the native flora of the region while enjoying a less formal, more recreational natural setting," according to Richard M. Lewis, director, Cornell Plantations. "Plants of the Cayuga Lake Basin are emphasized. Many species occur naturally and others have been introduced for wider variety," he said.

Development of the area, a project of the Plantations since 1964, was made possible by the establishment of the Cornell Plantations Garden Fund, a gift from Mrs. Mundy. The fund also provides for the maintenance and operation of the garden, which is located near the central Cornell campus between Forest Home Drive, the Rockwell Field Laboratory and Judd Falls Road.

November Open House

On Saturday, November 15, the College of Agriculture and Life Sciences and the College of Human Ecology together with their respective Alumni Associations will sponsor an Open House for interested high school students. Registration in advance is requested through forms distributed to Guidance Offices through Alumni Association representatives. Registration will begin at 8:30 a.m. in Bailey Hall on the Cornell campus.

The program will begin at 9:00 a.m. with a multi-media presentation, "The Cornell Experience", followed by visits to various academic departments in either college, information on career opportunities and admissions, a student panel; it will conclude with a bus tour of the campus. The program should conclude about 3:00 p.m.

Alumni assistance is needed in locating prospective students and in transporting the students to the campus. For further information contact John J. Sullivan, Agriculture and Life Sciences Alumni Association President, 72 Wolcott Street, LeRoy, New York, 14482, (716-967-6352); Laing E. Kennedy, Alumni Association Secretary, 205 Roberts Hall, 607-256-7651, or Helen Pape, Director of Human Ecology Admissions, 607-256-3049, N-103 Van Rensselaer Hall, Cornell University, Ithaca, New York, 14853.
"We are grateful to you all for your continued support and inspiration..." 

Dean W. Keith Kennedy addressing the Annual Breakfast meeting of the College of Agriculture and Life Sciences Alumni Association. The annual event was held in connection with Cornell University Alumni Reunion activities last June 14. The Dean spoke on the state of the College.

HIGHLIGHTS OF THE JUNE 14TH MEETING

ANNUAL BREAKFAST Over 258 Alumni and friends of the College of Agriculture and Life Sciences gathered to honor retiring faculty, see old friends, and hear Dean Kennedy. This was the largest alumni breakfast meeting ever held.

ALUMNI AWARDS Awards were presented to the Junior with the highest average for two years and the Senior with the highest average for three years in the college. The award winners in 1974-75 were Gary P. Wilton with a 4.08 average in his junior year, and Cheryl A. Parks and Amy E. Dietz, each with a 4.02 average in her Sophomore year. In 1975 the Association will initiate a new award to recognize Service to the College.

COLLEGE OPEN HOUSE Some 300 prospective students attended the College Open House which was held Saturday, November 9. Thirty-three counties and 83 schools were represented.

MEMBERSHIP The year 1974-75 was a good year for new members as over 1,300 College Alumni now belong to the Association.

NEW OFFICERS President · John J. Sullivan ‘62; Vice-President · Julian Carter ‘37; Secretary · Laing E. Kennedy ‘63; Treasurer · George J. Conneman ‘52; Board of Directors · Ray Axtell ‘76, William Bigham, Sr. ‘48, Stevenson Close ‘41, Anita Decker ‘75, Phillip A Green ‘64, Linda Keene ‘77, Albert R. Lounsbury ‘55, Clifford Luders ‘38, Pamela Murtaugh ‘73, Charles H. Riley ‘73, Robert Sears ‘62, Howard Sidney ‘41.

Honored for their leadership and service to the Alumni Association of the New York State College of Agriculture and Life Sciences at Cornell University were retiring Board member Floyd E. Morter ‘52 on the left and past secretary Richard A. Church ‘64 on the right. 1974-75 President Clifford F. Luders ‘38 (center) presents the awards to these outstanding alumni for their work.

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Inside Cornell's Dairy Store . . .

Who Fills Those Milk Cartons?

by RANDY HELLER '76

Back in the horse and buggy days, when Tower Road was just a dirt path, there was a place where you could buy cheeses, milk, butter and cream straight from Cornell's farms. Cornell has come a long way since the days when quarts of milk were 10¢, but the Dairy Store is now the place where students and faculty in the College of Agriculture and Life Sciences go to find freshly made dairy products at reasonable prices.

Almost from the beginning Stocking Hall has served as a place where the Cornell community could enjoy the rewards of the Dairy Science Department's hard work. A butter lab, located where the Dairy Store is today, and a milk plant gave dairy students invaluable behind the scenes experience while fulfilling course requirements. The dairy salesroom, operating from a small table around back, not only provided an outlet for the products of the Cornell herd but also gave students a look at salesmanship and merchandising.

Meanwhile, a small sandwich room in Stocking Hall was serving the luncheon needs of Agriculture students and faculty. When the opportunity to move into a much larger room arose, the sandwich shop eagerly traded their cramped quarters for the newly renovated room. Furnished with equipment from an old army hospital, the Dairy Store finally opened the doors of its present location for business in 1948.

The Dairy Store has grown considerably since its World War II days. Over 3 million pounds of milk were processed last year by the milk plant. Every day stainless steel trucks deliver 1,500 gallons of milk to be used in the production of homogenized milk, skimmed milk, chocolate milk, ice cream, yogurt, and chocolate pudding—all processed and packaged in Stocking Hall.

One characteristic hasn't changed over the years—the consistently fine quality of the food produced and sold at the Dairy Store. If the ice cream tastes richer and creamier than other local brands, it's because Cornell puts 20 per cent less air in their ice cream than their competitors. They're not out to make a profit so it's the customer who benefits. Under the skillful supervision of Plant Manager Jack Giroux, a veteran of 30 years, all of the newest procedures developed by Cornell researchers are studied and implemented whenever possible. As a result, the Cornell community is often the first to reap the rewards of the College's research and experimentation.

The Dairy Store also supplies the needs of those organizations large enough to buy in bulk. The Cornell Dining Department is the largest single purchaser of Cornell milk, but many fraternities take advantage of the discount rates by getting daily deliveries also.

So if you're looking for freshness and economy served with a friendly smile, there's no need to look any further than the Cornell campus. The Dairy Store in Stocking Hall has come a long way since the horse and buggy days. But one thing remains unchanged—the fine quality that brings students and faculty back year after year!

Cornell students who work at the Dairy Store regularly check the shelf life of perishable products and remove those which are no longer fresh.

Milk Plant employee Robert Piech carefully sterilizes the six-gallon milk containers used for bulk sales.
The mention of college tradition brings to mind fraternities, gleeclubs and football. However, at Cornell University we have a tradition all our own—Louie’s Lunch Wagon.

Louie’s Lunch Wagon was instituted in 1918 when Louis Zourakos bought an old Ford truck, stocked it with food, and began making nightly rounds to various Cornell fraternities and sororities. In those days his big seller was a Canadian bacon sandwich and students lined up to buy it.

Louie didn’t have a specific location for his truck in those early years. He followed the crowds to concerts, athletic events and dances.

He and his truck became an institution at the Cornell crew races when they were held along the east shore of Cayuga Lake. In those days many people purchased tickets for the train that followed the boats down the lakefront. Louie was invariably waiting at the finish line to provide fans with hot dogs and ice cream.

Every February, when tuxedoed Cornellians and their dates packed the old Drill Hall, now known as Barton Hall, for the Junior Prom, Louie was parked outside, serving up hamburgers and chocolate shakes.

By 1947 Louie permanently located his service on Thurston Avenue in a special electrified truck he had custom-built in Cortland, New York. City officials never said a word when he installed his own electrical outlet without municipal authorization.

By the time Louie retired in 1955 he had become an institution among Ithaca residents, Cornell students and distant alumni. The business he established still thrives on the Cornell Campus.

In 1962 Arthur “Cookie” Machen and his wife Thelma became the new proprietors of Louie’s. They expanded the business to include another truck and began taking day and night shifts at the same Thurston Avenue location used by the original Louie. They sold a lot of tuna subs at the now-unheard-of price of 50 cents each. Cookie remembers the identical twins who wallpapered their dorm room with the pint bags the subs were packaged in.

“They used to come down to the truck just about every night for a sub. We had a lot of regulars and we got to know quite a few of the kids by name.”

Business was booming, so a third truck was added to the fleet in 1964. The new truck was run by Cookie’s son Ed at its present location on Stewart Avenue below Noyes Center and become known as “Louie, Jr.”

Louie’s has been a part of the Cornell Community since its inception in 1918. These students are taking an active part in one of Cornell's grandest traditions.
Today Ed runs the business. He owns Louie, Jr. and leases the other two trucks from his parents. Ed is a hard-working man—he gets up at nine a.m., has two cups of coffee with five cigarettes, makes out food orders, and does maintenance work on the trucks. Once such preliminary work is out of the way, at about 11 a.m., he heads over to Thurston Avenue to put in a 14-hour day behind the grill.

"I couldn’t do the job if I didn’t like the kids," Machen says. "The business runs pretty smoothly and we rarely have any trouble with our customers."

The Machen trucks are carpeted and equipped with television sets, police monitor radios, interconnecting telephone receivers, and an assortment of salad bars, steam tables and Magi-kitchen charbroilers.

With this equipment, the trucks serve 14 kinds of subs, potato chips, hamburgers, hot dogs, bubble gum, No-Doz, etc.—everything the college student needs to get him through those late evening munchies.

Even though the Machens never met the original Louie, they are constantly reminded of the man who started it all 'way back when.

"We still get letters and post-cards from all over the world—from Peru, Colombia, Europe and everywhere. Alumni still come back and ask for Canadian bacon sandwiches. They’re really disappointed to learn we don’t carry them anymore. The way the economy is today, we just can’t afford it."

With or without Canadian bacon sandwiches, Louie’s Lunch Wagon is a hallowed Cornell institution. Perhaps 30 years from now we will be writing our own good-wishes to Louie from distant locales.
Well, I reckon John Denver about says it the best when he hollers out over the radio, "Thank God I'm a country boy!" What a lot o' them young whippersnappers up at Cornell these days don't seem to realize is that the University where "any person can find instruction in any study" was from the very beginning dedicated to educating our country boys to be better farmers. There's a lot of us country boys around who are ever grateful we went to Cornell for our educations; the Agriculture College is a nationwide leader in better crop production, and food management and preparation. But, what I'm here to tell you is how the whole thing got started. Now my grandfather, another old Cornell farmer, attended Cornell about ten years after it first opened its doors, and so what I know about the school's beginnings come from what he told me.

It seems the whole thing was conceived in the early 1860's when Ezra Cornell--Ithaca's local tycoon and state senator--was tossin' around the idea of what to do with some of his money. According to grandpa he had a bundle of it. Made a lot of it investin' in Western Union Telegraph. Ezra was 'specially concerned with providin' folks with a practical education they could apply later for the good of others in fields like farmin' and engineerin'. 'Way back in Ezra's mind was a dream--to build a university in Ithaca where folks could learn all those practical things.

While servin' up in Albany with the state legislature, Ezra met up with Andrew D. White from Syracuse, and the two of them discovered they had the same dream of erectin' a great university. Y'know, hallowed halls of learnin' and all that. The event which set the gears in motion, so to speak, was the federal government's passage of the Morrill Land Grant Act of 1862. The purpose of the Morrill Act was to donate public lands to the states, so the states could build colleges which would include instruction in agriculture and the mechanic arts (later called engineering).

In February of 1865, White introduced a bill in the State Senate calling for the establishment of Cornell University under the provisions of the Morrill Act. After a few months of the usual political hassles that always go on up in Albany, the bill was passed by both houses and signed by Governor Fenton.

My grandfather went up to Cornell in the 70's. During that decade their course offerings in agriculture were slim. They were mostly farm practice, animal breeding, crop production, and the like. At that time, all students, regardless of what they came to study, had to take a course or two in agriculture, according to the provisions of the Morrill Act. In 1871, just a couple of years before grandpa started there, two important things happened.

First, a Bachelor of Agriculture was offered. Second, they tried to set down some standard academic requirements for the agriculture major.

Grandpa remembered when they appointed Isaac P. Roberts as agriculture professor; he later was made dean of the College. Roberts is generally given credit for improving the quality of the agriculture department. Now, you're likely asking yourself--what sort of things did aggies study back then? Well, I've got a circular from about 1875, and it advertises courses in such areas as practical and experimental agriculture, mechanics applied to agriculture, horticulture, botany, veterinary science, and several others. Pretty much, the entire department was working on some aspect of food production.

About 1890, the Department of Agriculture expanded into a College of Agriculture and Isaac Roberts was named its director.

Well, that's some of the highlights of those early years. Now we're going to skip a few years to the first year of the new century which marked the beginning of this new-fangled department called Home Economics. Home Ec started as a correspondence course for farmers' wives, run by Martha Van Rensselaer. The first bulletin for these women came out in January 1901, and I've been told by people who remember them that they were a real success.

By the 1903-04 academic year, there were three courses in the Ag College dealing with home and family life; these were taught by Martha Van Rensselaer and Anna Botsford Comstock. In 1906, Flora Rose came to teach Home Ec courses, and her arrival marked the beginning of the now-famous team of she and Martha Van. Folks who knew them tell me that they lived and breathed Home Ec. making the school one of the best around.

Well, once Martha and Flora got goin' they kept addin' more courses, until in 1907 Home Economics was made
### About Food Courses At Cornell

a full-fledged department within the Ag College. A few years later, 1911 to be exact, the two were the first women at Cornell to be appointed full professors.

Now, in the late teens and early twenties when I was preparing to come to Cornell—1919 to be exact—the Department of Home Economics became a school of its own, and courses in that school were just like June bustin' out all over. By 1919, they had 17 faculty members teaching courses in six major areas. Of course food and nutrition was one of their biggest and best, but they also had courses in clothing and textiles, housing and design, women in household, industrial and political life, household management, and industrial management. In 1925, the School became the first state-chartered College of Home Economics in the country, and Martha and Flora were named co-directors.

I've got a catalogue here from my years at Cornell, and I just want to give you an idea of some of the courses offered in food and food preparation. In the Ag College, under animal husbandry we had courses like meat and meat products which taught students how to slaughter and cure meats. Under the dairy department there were courses in making milk, butter, cheese, and ice cream. If students were enrolled in farm practice, they grew crops like vegetables and grain.

Now, believe it or not, it was the Home Ec School's course in industrial management that started the School of Hotel Administration. In about 1921, the American Hotel Association proposed to sponsor a course in hotel management. It seems they were aware of the success that Martha and Flora had been having, and they were sure that if their hotel course were placed under the Home Ec School's wing, it would be a success. So, in 1922, with money from Ellsworth M. Statler of the Statler Hotels, the first college hotel course in the world was born. Yep, that's right: first in the world right here at Cornell. Although the initial course enrollment was only 24, students kept comin' and more courses in hotel were added. In its early years, this department never received any funds from the University nor the state. It was a pet project of owners and managers all over the country—especially Mr. Statler—and they gave the funds for it.

Well, since I graduated from Cornell I keep up on what's been goin' on up there by reading the Alumni News, and the Cornell Countryman. Every few years I get back there for homecoming and see a football game. Got to see that fella Marinaro a couple of years ago.

In 1941, they opened the Graduate School of Nutrition to coordinate the nutrition research being done in the Veterinary, Agriculture, Home Ec, and Arts Colleges. In 1950, they dedicated Statler Hall for the mushrooming Hotel Administration School.

There's been other changes in the past few years that my grandson brought me up on. It seems in 1970 they decided to change the title of the Home Economics College to the College of Human Ecology seeing as now they also study child psychology, and social work and such things. Just this past year, a new joint division of Nutritional Sciences was formed, combining the Graduate School of Nutrition, and the Nutrition and Human Food Department.

Well, I really don't know how much more I can tell you. You're welcome to come back down to the farm any time you want to hear more about Cornell when I went there. Hey y' know, I still know all the words to the Alma Mater. "Far above Cayuga's..."

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*Students in dairy science wore lab coats as they worked in a milk testing laboratory in the 1880's. Dress today differs, but labs are still important.*
Ithaca
Dining Defined

by KAY HETRICK '76

to dine (din) v. Dined, Dining
1. To eat dinner 2. To take in through the mouth as nourishment
3. To consume 4. To take food; have a meal.

There are as many ways to partake of a meal as there are definitions for the word "dine". What's your preference? Are you partial to a gourmet meal, prolonged and savory? If you're in a hurry or low on cash, perhaps just a burger and fries would do for you. Maybe some Italian food served in a home-like atmosphere? Or the privacy of a candlelit table with Pot-au-feu for two? Dinner on a train or in a century old farmhouse? Steak or seafood, crepes or health food, Chinese, French, Italian, or just plain American cooking. Ithaca has it all. Whether you want just to nourish your body or relish an experience as well as a meal, you'll find it all within five miles of downtown Ithaca.

1. L'AUBERGE  1152 Danby Road
Haut-French cuisine. Located in a 125-year-old farmhouse, tasteful decor plus preservation of some of the antiquities are combined to give L'Auberge a charming atmosphere for an intimate meal.
2. TURBACK’S 919 Elmira Road
   Built in the 1880’s, the lovely house of the many gables is now a unique, plushly Victorian restaurant. Entree specials served with unlimited table wine may be purchased for $5.95.

3. CHINA INN 124 Coddington Road
   The China Inn prides itself in serving both Mongolian and Manchurian Chinese food and at the bar you can get such exotic drinks as Samoan Passion. Specialty of the house: Peking Duck.

4. JOE’S Buffalo Street and Route 13
   Owned and operated by Joe Yengo, Joe’s has been in the same location since 1932. The congenial atmosphere and home style cooking make this a “must” for Italian food lovers.

5. MIRACLE MILE
   Elmira Road—Just before Ithaca proper
   Most of the restaurants here are low priced and have quick, convenient service. Though not high on atmosphere, if you’re in a hurry, this area can’t be beat.

6. MOOSEWOOD
   DeWitt Mall, Seneca and Cayuga Streets
   Vegetables, cheese, fresh spices and creative cookery equal marvelous Moosewood specialties. The basic supposition is that if healthy foods are deliciously prepared, people will be inclined to eat them.
   Price range: $2.00-$3.50

7. THE STATION
   806 West Buffalo Street
   Opened in 1966 in the Old Lehigh Valley Train Station, most of the original decor has been retained, giving the Station an A plus on atmosphere. Price range: $5.50-$10.50.

8. THE BOX CAR—LOADING DOCK
   1274 Dryden Road
   Entrees range from $5.25-$7.50 and include such delights as Pullman’s Palate Pleaser, which is boneless prime ribs. Old time flicks and dancing to live entertainment are other attractions.

9. BEAUJOLAIS
   602 Elmira Road South
   Specialty: crepes. Opened recently in the original Old 100 Restaurant, Beaujolais is already famous among the crepe lovers of the Ithaca area. Every variety is delicious.
The next time you are out in your vegetable patch patiently weeding your cabbages and carrots and you happen upon one or two missing leaves, a few gnawed stems or an uprooted plant, don't be so fast to blame the rabbits. It might very well be those Cornell vegetarians searching for a bit of sustenance.

Forgive them, for they know not of the many vegetarian-oriented alternatives to eating that have recently sprouted in the Ithaca area. Many remain ignorantly ensnared in the stronghold of traditional Co-op Dining Services where they pick and choose among meat entrees and come away day after day with sparse trays of cottage cheese, ice cream and occasional decorative greens.

Inform them, please, that their days of eating monotony are over. Let them know of the meatless cabbage rolls, the bean salads and broccoli custards available at Co-op's new 2000 plan in Balch's beautifully renovated dining room on North Campus. Tell them of the variety of international meatless dishes served daily at Moosewood Restaurant on Seneca and Cayuga Streets in downtown Ithaca, and of the herb store on Eddy Street in Collegetown where the most ambitious can do the week's grocery shopping with an eye toward vegetarian cookery. Tell them of the Cabbagetown Cafe, also on Eddy Street, just outside of campus, where all-you-can-eat specials and an easy atmosphere are hard to resist.

But back to the vegetarian in the vegetable garden. "How am I to recognize him?" you ask.

A valid question, since vegetarians are a difficult breed. As a group, they defy definition. Each individual has created his own constitution based on reasons ranging from religion through nutrition and preference to fad. Accordingly, each person has prescribed his own diet. Informal interviews reveal that the majority of vegetarians begin with a nutritional consciousness on a world food level. From there, the evolution of a vegetarian may or may not proceed to a religious or moralist stage where even the thought of partaking of an animal becomes repulsive.

Diets are somewhat dependent on this evolutionary status. Some vegetarians will eat only vegetables, fruits, seeds and nuts. Others will include animal products such as eggs, milk and cheese in their diets, and still others do not include fish in their set of restrictions.

It is impossible to generalize and equally impossible to
Food Fact and Fancy
by MARYHELEN KLEIN ’76

One of the most innovative approaches to nutrition education at Cornell can be found in a two-credit spring semester course offered by the Food Science Department. “Food Facts and Fads” offers students not only a variety of lecture topics but a realm of speakers as well. Each Monday night in Uris Auditorium an expert in the nutrition field discusses one aspect of food nourishment. “Man’s Best Friend—The Cow?” and “Food Sanitation: The Good, Bad and Buggy” were two of the more enticing lecture topics from last spring’s series.

Most of the speakers from past semesters have been members of Cornell’s science departments. Next spring, Dr. William Shipe, the course director, intends to broaden this list by inviting members from outside institutions to lecture.

Topic lectures are generally directed to students at the consumer level to aid them in selecting foods and also in evaluating the merits of government proposals for food problem solutions. The pros and cons of vegetarianism, vitamin intake and dieting were a few of the topics discussed last semester.

In order to provide answers to questions submitted by students, a task force of fifteen volunteers from the class researched and edited an information pamphlet which they distributed in installments. These are some of the findings published by that group:

* The United States spends the smallest percent of its income on food consumption in the world. Yet no country is better fed than this one, or exhibits a larger percent of overweight in its population.
* Your sense of smell is more acute in the morning and decreases after eating. Sipping a martini or popping a sugar cube accelerates this decrease. Drinking bitter tonic or dry white wine slows it.
* Cultural food tastes often develop from habit. A popular drink in Greece is white wine called retsina. As the name implies, it is a heavily resin flavored drink originally shipped in pine casks which exuded the substance. Though modern shipping quality has improved, the resin flavor is still popular with the Greeks who have grown used to it.
* Sugar is less damaging to your teeth in liquid form. A soft drink will cause less cavities than a candy bar.
* Almost one half of the nation’s $75 billion medical bill is the result of poor nutrition.
* If Americans were to reduce their meat consumption by 10% for one year, it would free 12 million tons of grain for human consumption. This is enough to feed 60 million people for a year.
* 96% of American school children can identify Ronald McDonald, ranking him second only to Santa Claus.
HENS AND HERRINGS . . . untapped food resources

by JODY JAFFE '76

Do you know what a Bird Dog is? Does Chickalona sound like a jazz musician's name? Is an Egg Roll only a Chinese food? If these questions leave you baffled, the answers will astonish you.

Bird Dogs, Chickalona, and Egg Rolls are only three of the 38 different poultry products developed at Cornell University by Robert C. Baker, Professor of Food Science and Marketing. The goal of the program was to increase the salvage value of hens that were past their productive life span and to expand the market for the poultry industry. Due to the increase in popularity of younger chickens, the old hen carcasses are of virtually no use in the American kitchen. Most supermarkets will not carry old chickens, because not many people buy them. "We did what they do in the dairy industry," Prof. Baker said, "but instead of using old cows to make bologna, we used old chickens."

During the 60's, Prof. Baker developed and market-tested these 38 new products. However, it is only today that the products are starting to sell. "Although their taste is similar to the meat products," commented Prof. Baker, "it took us twelve years to break the psychological barrier that hot dogs don't come from chicken."

When these products were developed, the deboning of the hen was done by hand, increasing the price of the finished product. Often the price of the chicken product was as high or higher than the comparable meat product due to labor costs. Deboning machines are now in use, and the cost has been decreased. Most chicken products are now less expensive than their beef counterparts.

With all the major kinks worked out of the new products for the poultry industry, Prof. Baker has focused his attention on a new market—the fish industry. Prof. Baker's current research is being funded by the New York State Sea Grant Institute, a program of research in seafood-related projects. He is studying the use of under-utilized fish, such as the sucker. Due to psychological barriers, these fish are often labeled trash fish, furthering the problem of their under-utilization. "The only thing different about most of these fish is that they are bonier, and difficult to filet," Prof. Baker said. "The fish that are too oily or too 'fishy' can be used as pet food, but there is no reason not to use the other fish for human consumption."

According to Prof. Baker, this is a natural time to start using these trash fish. "As a nation, we should look at our wasted resources," he said. "Although we don't have a protein shortage problem in the United States right now, we should make use of our under-utilized resources. Most agricultural economists would agree that two or three bad growing seasons could substantially raise the price of high protein food."

This chicken hot dog, known as the Bird Dog, is one of the 38 new poultry products developed by Prof. Baker.

A new use has been found for trash fish: the meat is ground up and then made into products such as fishballs.
Not only are these fish a wasted resource (95 per cent of all the fish in the Great Lakes are trash fish), but they also pollute the waters. According to Prof. Baker, thousands of metric tons of these dead fish are thrown back into the water. The decomposing process then requires oxygen and the remaining living fish must compete for the available oxygen. When the oxygen supply is lowered the water becomes degraded. “Thirty per cent of the fish in a flounder catch are trash fish, and most of these are thrown back into the water,” he said.

Prof. Baker is researching new and more productive uses for this untapped resource. A process has been developed to get maximum yield out of each fish. After the fish are caught and cleaned they are fed into a deboning machine, producing spaghetti-like strings of fish meat for human use; the crushed bone, skin and heads are saved for later use in pet foods. The strings of fish meat are then processed into whatever product is desired. New products are being developed every day for possible uses of the fish meat. Some already developed are: Swedish meatballs, fish potato chips, fish patties, fish crisps, gefilte fish, chili, and spaghetti and fish balls. “The taste is almost identical to the usual counterpart,” said Prof. Baker, “however we are having some problems with the texture.” This is one of the minor problems that can be solved with more research. The main problem will be to break the psychological barrier of eating “trash fish.” “In Greece, squid and octopus are delicacies, and here they are trash fish,” Prof. Baker noted. We are not a nation of fish eaters, but if the protein prices go up, we may be forced to overcome our food prejudices.

Once Prof. Baker’s research on trash fish is completed, he hopes that the industry will see the example set by Cornell University and market the fish products. “If the industry does not market the fish, then our research has failed,” said Prof. Baker. Based on the success of the chicken products and the need for alternative protein sources, Baker’s research is sure to be an important contribution to the food industry.

“*We did what they did in the dairy industry, instead of using old cows for bologna, we used old hens.”*

**Hardcooked Eggroll slices** provide uniformity and aesthetic quality for salads and sandwiches.
Clinic Studies

FOOD BINGEING HABIT by BRENDA JACOBS '77

Therapy is now available at Cornell for persons with "food binging" difficulties. This serious but unpublicized problem is finally getting a closer look. Severe dieting followed by constant food binging is a fairly rare phenomenon among most of the population, but among women between the ages of 15 and 21, this type of behavior is more common.

Labeled the "Cinderella Syndrome" by Marie Boskind-Lodahl, a therapist at Cornell's Mental Health Clinic, the disorder is characterized by a feeling of being out of control, and involves persons for whom food has become the focus of life.

Women and Bingeing

"Because of cultural factors, the Cinderella Syndrome affects mostly women," Lodahl said. "We find this kind of thing throughout Eastern and Western cultures. Fat in men is tolerated while women are expected to maintain slim, sexy bodies."

Food bingers typically start binging in high school. "In all of the cases I've studied, the problem began after severe dieting attempts in late adolescence," Lodahl said.

The main problem facing Cinderella Syndrome women involves self-esteem. These women suffer from feelings of worthlessness and inadequacy.

Dr. William White, director of the Mental Health Clinic, differentiated between food bingers and compulsive overeaters. "Food bingers eat too much over short periods of time, such as a day or two. On the other hand, compulsive overeaters do so over a period of many months."

White admitted that "a lot of women do get into binging on occasion, but we're talking about women who do this consistently." White defined such women as self-destructive, clinical food bingers.

Most of these women live with the fear that their behavior is going to be revealed," Lodahl said. "There is a great sense of shame involved here. Most bingers don't tell anyone they do it."

The Theoretical Aspects

Last spring, Lodahl began a program of group therapy for food bingers. To attract people to the program she placed an advertisement in the newspaper. Although 60 people answered the ad only about 15 were deemed to be clinical bingers. After working with these people, Lodahl formulated a number of theories about the syndrome.

"Fat in men is tolerated, while women are expected to maintain slim, sexy bodies."

First, Lodahl believes there is a correlation between anorexia nervosa and binging. Anorexia is a condition that develops when a person stops eating to the point of virtually starving. "Food binging has occurred in every case I've studied," Lodahl said. "Two things are happening: the pursuit of thinness and binging."

People often resort to forced vomiting, laxative abuse and severe dieting to compensate for their binges.

Secondly, Lodahl noted that all the women in her therapy group lacked long-term, loving relationships with men, and often had problems dealing with other women. The binger is generally a passive person who hasn't really started to feel her power and independence in many ways.

Bingeing Stems From Childhood

"Most of the women were fairly good children," Lodahl said. "They were not rebellious kids who went against the wishes of their parents. They were so intent on pleasing other people that they lost sight of their own needs."

Lodahl disagreed with the traditional theories which view anorexia nervosa as a rejection of femininity (i.e. the little girl who doesn't want to grow up to be a woman). Instead, Lodahl believes these women are desperately trying to be feminine and are aiming their attempts towards what they conceive to be feminine traits. "The result of this ambition," Lodahl said, "is too much emphasis on that concern so they haven't been able to develop their powers in other areas."

"Many of the women have a distorted body image," Lodahl said. "It's not a delusionary thing, but one our culture throws out in the form of role models of what looks healthy and beautiful."

Lodahl noted that a feeling of sisterhood developed among the members of last spring's group that was vital to its success. Although it was a short-term therapy group, meeting only two hours a week for 11 weeks, Lodahl said there were enormous changes in self-esteem and assertiveness in the members of the group.

A follow-up study of those women who attended the therapy showed "some backsliding," but none had gone back to their original position, Lodahl said.

This fall, Lodahl began another therapy group that will continue for the entire year with the hope that most of the people will feel good enough to leave the group at midterm so that she can take some new people on.
Walter Stern '43, has been appointed agricultural attaché to Turkey. He has been with the U.S. Department of Agriculture.

Loyd E. Powell Jr. (Ph.D. '55), professor of pomology, has received the Joseph Harvey Gourley Award jointly with Prof. Schuyler D. Seeley of Utah State. The award, reserved for the best research paper in the field of pomology published in the American Society for Horticultural Science's Journal during 1974, was presented to Drs. Powell and Seeley for their paper on tracing biochemical changes in abscisic acid, a growth inhibiting hormone found in apple trees and other plants.

Harlan P. Banks (Ph.D. '40), professor of genetics in the division of Biological Sciences, was awarded a Certificate of Merit, the highest award bestowed by the Botanical Society of America. He was cited for distinguished achievement in and contributions to botanical sciences advancement, distinguished teaching, numerous contributions to the knowledge of early land vegetation, and services as former president of the Society. He has also been named an honorary vice-president of the International Botanical Congress, president of the International Organization of Paleobotany, and was awarded the Chancellor's Award for Excellence in Teaching. He has been honored as a Fulbright Scholar, a John Simon Guggenheim Memorial Foundation Fellow, and a Fellow of Clare Hall, Cambridge University.

Patricia C. (Ulbrich) Plath '63, associate professor and Head of the Ecology and Environmental Technology Department at Paul Smith's College, was one of the five teachers in North America to be awarded the Manufacturing Chemists Association Junior College Chemistry Teacher Award. The award is presented for excellence in teaching chemistry, dedication to classroom science instruction and extracurricular educational activities, and motivation of students to science careers and citizen responsibility. She was awarded an Outstanding Educator in America Award in 1973, and has been in constant contact with Cornell since her graduation by sending potential students.

Thomas F. Massaro (Ms. '65), a research associate in the Division of Nutritional Sciences, has been cited by The Journal of Developmental Psychobiology for submitting the best paper in his field. The paper, titled "Protein Malnutrition in the Rat: Its Effect on Maternal Behavior and Pup Development", was co-authored by Profs. David A. Levitsky and Richard H. Barnes.

James L. Brewbaker (Ph.D. '52), Arden D. Day '50, William F. Hug Jr. '48 and Paul L. Zwerman, professor of soil and water conservation, were named Fellows of the American Society of Agronomy for their "professional achievements and meritorious service." Prof. Brewbaker is a professor of horticulture and genetics at the University of Hawaii, Prof. Day is in the Department of Plant Sciences at the University of Arizona, and Dr. Hug is Deputy Vice President and Dean for the Institute of Agriculture, Forestry and Home Economics at the University of Minnesota.

Peter J. Davies of the genetics section in the Division of Biological Sciences has been promoted to associate professor with tenure. Together with Arthur W. Galston '40, he has completed a book entitled, "Control Mechanisms in Plant Development" and has recently completed three chapters in a general biology text to be published later this year. He has focused much of his research on how plant hormones cause plants to grow and develop. Before coming to the College in 1969, he was an instructor in the Department of Biology at Yale University.

Museum Given Honor Award

Cornell University's Herbert F. Johnson Museum of Art, designed by I.M. Pei & Partners, has been selected for a 1975 Honor Award from the American Institute of Architecture (AIA).

One of nine winners of the awards from among 606 entries, the building was completed in 1973 with a $4.8 million gift from Herbert F. Johnson, '22, honorary chairman of S.C. Johnson & Son., Inc., the Johnson Wax Company of Racine, Wisc.

Skeet Shooters Give Scholarship

A $500 scholarship has been established at the College of Agriculture and Life Sciences by the National Skeet Shooters Association. The award will be made annually to a student majoring in environmental conservation and will be based on character, scholastic achievement, and the need for financial assistance. The first scholarship will be awarded this fall.

Frank C. Massey, vice president of the Association's Charities Foundation, Inc., said that recognition of outstanding students in conservation "will help promote the harmony that must exist between man and his environment."
Program Areas Help Students Decide on Careers

FACED WITH A RAPIDLY CHANGING WORLD, today’s students in the College of Agriculture and Life Sciences are often baffled when they must decide on a course of study leading to a career. Specialized training may not be best when a job requires a general background, so the College has defined program areas to help undergraduate students simplify their choices, especially in their first two years of study.

Nine of these program areas encompass the specializations the College offers. The student can start from a general emphasis on subjects like plant or animal studies, business, or the environment then move to a more specialized area within the broader program at any time within the next two years. Or, if he prefers the more general emphasis, he need not specialize further.

During those first two years, the student works closely with an advisor who will help him explore the career possibilities within specific areas. As a result, the choice of area of study and career can be tailored much more closely to the individual’s needs. Under this new arrangement, departments exist as before but a student may concentrate studies in a department or spread them through several within his program area.

Students graduating under this new “packaging” of program areas may be either specialists or generalists and they should be better equipped to respond to available career opportunities.

PROGRAM AREAS OFFERED

Agricultural and Biological Engineering students may one day design agricultural equipment, structures and machinery for food processing so they combine a background of physical and biological knowledge to help solve some of today’s technical problems.

Animal Sciences is directed toward generating new knowledge about the basic biology of animals and applying it to animal production. Students who choose this area may work in livestock production, farming, research, or specialized technical careers related to animals.

Applied Economics and Business Management students find courses in the sciences and humanities as well as economics and management essential because they are interested in farm business management and finance, business management and marketing, resource economics, food industry management and public policy.

Behavioral and Social Sciences. Studying ways people use and transmit knowledge, skills and attitudes through effective communication, teaching and understanding organizations in rural American leads to diverse careers that can include public relations, youth work, teaching, editing and broadcasting.

Biological Sciences. Understanding man and his relationship to the world is the focus of studies in the basic biological sciences, offered through a joint Division between the College of Agriculture and Life Sciences and the College of Arts and Sciences. Students gain special insight into the natural world through a core of basic scientific courses, then concentrate in one area. They may go on to advanced study in medical or graduate schools.

Environmental Studies. Learning about the interactions of man with natural processes, students combine here the basics of science with ways to apply and use science and technology. Solving environmental problems through work in research organizations, government agencies, or private industry, or graduate work may be the goals of those who are concerned with appreciating and understanding their environment and man’s impact on it.

Food Science. The food industry, the world’s oldest and largest, needs people who know how to produce, process and distribute safe and nutritious food to the consumer. Students add courses in technology application to a basic science background to prepare them for work in food technology and management and related areas.

Plant Sciences. Plants are the source of food and fiber for man and feed for animals. Study in the plant sciences provides emphasis in areas ranging from general plant science to specifics like plant protection, field and vegetable crops and horticulture. Technical work in some area of plant science or advance degree work may follow.

GENERAL and SPECIAL PROGRAMS

If a student wants a program with maximum flexibility in Agriculture and Life Sciences, the general program allows time to decide on career objectives within agriculture, as well as providing a broad background in agriculture.

Special programs in international agriculture, microbiology and statistics and biometry are also included in this program area.
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About the cover: This unusual-looking structure is a three dimensional research project that was designed and is being built by students. The orthorhombic housing unit was chosen for construction because of its possible significance in the areas of multi-family housing and solar potential. For more details, see page three.

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THE ORTHORHOMBIC HOUSE

Something New Under the Sun

by JODY JAFFE '76

If you happen to see the lights burning at odd hours in Rand Hall, chances are architecture students are diligently working on their design projects. Often, students contribute innovative ideas to the field of architecture. Such is the case of Brian Nowak.

In the fall of 1972, Brian Nowak, '75, submitted the orthorhombic housing unit as a studio design project in multi-family housing. This eight-sided, forty-foot-high design was well received by the faculty of the Department of Architecture. "I happened to be on the jury for the design project and I liked the idea because it offered an alternative to multi-family housing and had solar potential," said Professor Ralph Crump, Architecture and faculty advisor for the project. As a result, this solar potential unit is now being constructed in Ithaca.

Solar potential is a different concept for the utilization of solar energy. Any house can collect solar energy by just tacking on pieces of solar hardware. However, true solar potential is achieved when the utilization of solar energy is a fundamental aspect of the design of the structure, rather than an afterthought. Professor Crump feels that the application of solar energy should be integrated with the structure and should affect the appearance of the architecture. "Our buildings should be natural solar collectors. We just can't afford to build energy-wasteful buildings anymore."

The orthorhombic housing unit is an example of this new trend in architectural planning. Its minimal surface area is ideal for heating efficiency. Many current solar heating units don't have the capacity to store the solar energy once collected. However, the efficiency of the orthorhombic solar heat process will be maximized by its ability to both collect and store the energy. This will be accomplished by placing solar collector panels containing water on all upper slopes of the unit. After the sun heats the water it will be pumped to storage tanks and then into heating units in the floor. These heating units will perform like radiators to heat the building. A wind generator will be installed on the flat roof, and if successful will supply the electricity required to pump the water. One of the most ingenious aspects of the design is its foundation which is actually a road for six steel wheels to run on. Since the house is on wheels it can be rotated up to 90 degrees so that it can literally follow the sun.

If you are familiar with the Ithaca weather, you might think that the prospective occupants of the solar house are in for a long, cold winter. This would be true if the unit were designed to rely exclusively on solar energy heating. However regular electric power will also be installed. "Even if solar energy is used 50 percent of the time, it would nevertheless be a considerable savings in fuel costs," replied Professor Crump.

The advantages of this two bedroom, rhomboid structure are not limited to its solar potential. The design was also chosen for its flexibility in multi-family housing. The structure that is now being built is a one cell unit which can be linked to the other cells by joining their "fans" (the part that sticks out) together. These housing components can be mass produced into different sized cells: two, three and four bedrooms. The entire structural system is on the outside. This means partitions are movable, windows can be added or subtracted, and walls can be rearranged.

"I thought it was worth building, suggested it to Brian, and here it is," said Professor Crump. However, it was not as simple as that. After deciding to build the orthor-

A college education is not limited to the classroom. Building the orthorhombic house are students who receive college credit while getting on-the-job experience.
orthorhombic housing unit, land, labor and materials had to be furnished. Cornell University supplied the land (between Cornell Quarters graduate students' cottages and Maple Avenue Apartments), and the architecture department supplied free labor (students) and $1500. This still did not cover the $60,000 worth of materials needed. With the assistance of Mr. N. Trethaway of the University Development Office, requests for donations of materials were sent to Cornell Alumni. Mr. F. Jaicks of Inland Steel, Mr. C. Dykes of U.S. Gypsum and Ms. G. Voegler of Pittsburgh Plate Glass responded with generous, unlimited donations. The Ithaca construction company, Stewart and Bennett Inc., donated their crane and other machinery necessary to build the unit.

Interest generated by the project resulted in plans to develop a solar greenhouse that could be connected to housing units. To finance this research, the National Science Foundation granted $35,000 to the Departments of Architecture and Agricultural Engineering.

Construction of this orthorhombic unit began in 1973, and since then over 120 architecture students have worked on the project. These future architects get on-the-job training and receive at least two college credits.

"It's a great way to learn about building," said Sophia Hesh, '79, "They teach us welding, pouring concrete, and installing glass panels."

Since the structure was designed and constructed by students, and sits in the middle of married students' housing, it is logical that a student will live in the unit. When construction is completed in 1976, the solar unit will be inhabited. The occupant will evaluate the living conditions and the efficiency of the natural energy source in exchange for rent. Due to a limited amount of space, it is doubtful that other units will be constructed for use at that location. However, these units are so easily transportable that they may be picked up by a helicopter and brought to a large piece of land.

Although the orthorhombic solar housing unit is an important contribution to the field of architecture, the main point of its construction is to involve students in building an imaginative and functional structure. Judging from the appearance of this unusual looking unit, it is certainly imaginative. Only time will tell whether it will be functional. So the next time you happen to see the lights burning at odd hours in Rand Hall, be prepared to see something new under the sun.

**The orthorhombic house being constructed in Ithaca is one unit. Each unit has two levels and can interlock with other units. A floor-plan of the first level is shown at left. Houses for larger families are easily constructed by attaching two or more units together by their 'fans.'**
Almost every Communication Arts major has heard the $64,000 question, "But what is Communication Arts doing in the Ag College?" Unfortunately, many Communication Arts majors don’t know the answer to this frequent query.

The present Department of Communication Arts in the College of Agriculture and Life Sciences grew out of the College’s extension work. Since its inception in 1869, extension work has been concerned with spreading useful agricultural information to farmers.

Starting with Cornell professors’ visits to rural communities and simple bulletins to farmers, spreading the latest word on farming developments, extension grew to today’s proportions, spawning a whole department of communication. Examination of old Agriculture College announcements gives a good idea of department growth.

A 1906–07 catalogue—the oldest one in the Mann Library stacks—named publicity as just one of Extension’s functions. The catalogue notes three separate extension work areas: experimentation and testing, reading courses for farmers and their wives, and nature study courses.

The 1910–11 academic year offered a resident course in extension. Categorized under Extension Teaching, this new course was “designed to acquaint students with parliamentary practice, to encourage interest in public affairs, and to train for effective self-expression in public.” In 1914, Bristow Adams began his Cornell career as the first Professor of Extension. Adams’ influence on the extension teaching resulted in the department offering courses in journalism.

In 1917, the Eastman prize for public speaking was established by A.R. Eastman of Waterville, N.Y., to “develop personal leadership in rural affairs.”

The 1920’s saw the addition of many courses in Extension Teaching, as the department was then called. In addition to the course in extension work, the following courses were offered:

- **Agricultural Journalism:** “A course intended to give the principles of news writing largely for publicity purposes in connection with agricultural extension work and for prospective county agents.”

- **Agricultural Newswriting:** "Lab work in practical newswriting for publication on agricultural topics in rural and agricultural journals."

- **The Country Journal:** “A study of the country weekly, its problems, its make-up, and its place as a factor in rural life in N.Y.”

- **Agricultural Information Service:** “A course concerned with the use of publicity for extension work.”

- **Oral and Written Expression:** “A practical course in oral and written presentation.”

- **Extension Methods, Organization, and Policy:** “A reorganized version of the old course in extension.”

By the 1934–35 academic year, the Department of Extension Teaching and Information had branched out to include other forms of mass media, and acknowledged the existence of the new medium—radio—with a course called Agricultural Radio Broadcast, which familiarized students “with the best methods of presenting ideas by radio. Practice includes auditions and participation in broadcast programs on the University radio station.”

There was another boom in Extension Teaching course additions in the forties, including Advertising and Promotion, Graphics, Photography, and Special Feature Articles (later magazine writing.)

Because of the wealth of Communication courses, the department was reorganized into various topic areas including journalism, oral and written expression, visual aids, and extension organization and method.

During the fifties, many of the courses dropped their agricultural emphasis, and adopted a general media approach instead. In the 1955–56 academic year, the department again recognized the utility of a new medium and started a course in Television.

The 1967–68 catalogue announced the rearrangement and renaming of the Department of Extension Teaching and Information to Communication Arts. The department was reorganized into several concentrated areas including Communication Theory, Interpersonal Communication, Broadcasting, Journalistic Writing, and Graphics. The reorganization saw the addition of courses more pertinent to the journalism world in general, like Communication Theory, History of Journalism, and Communication Law.

Communication Arts has a long history in the Ag College. From a concern with teaching people to be extension agents, the department has grown to offer the students a broad-based background in communications.
Food Prices 0

One Alternative: A Food Coop

Both residents and students in the Tompkins County region are fighting high food prices by banding together and buying their food as one food cooperative, known as the Ithaca Real Food Coop.

The Ithaca Real Food Coop operates on a ten percent food markup. In other words, the Food Coop buys food items wholesale, then marks ten percent on top of the price it paid in order to cover the expenses of the cooperative. In contrast, a supermarket gets a 50 to 100 percent markup on fruits and vegetables. The difference in price represents a substantial savings.

The Food Coop is not considered just a buying club where food can be bought cheaply; it is also a political statement of the members' disbelief in the capitalistic system. The Food Coop tries to eliminate as many price-increasing steps between the farmer and the consumer as possible.

The purpose of the Ithaca Real Food Coop is to take as much money out of the capitalistic system as possible and pass on the savings to its members. The Food Coop comprises a group of approximately 600 households—with a household ranging from one to fifty persons.

To order through the Food Coop, people are required to work for the cooperative, although no one is paid. Most people work a few hours a month.

The Food Coop is divided into local regions of which there are 33 in the Tompkins County area. To order, a household goes to the center closest to it.

There are two ways of getting food in the Food Coop. First, there is the weekly order which consists of fruit, vegetables, cheeses, bread, eggs, etcetera. Every Tuesday night, each household drops off its order form at its regional center and pays for the order. An initial membership fee of two dollars is paid at the center. Then, the following Saturday, the household picks up the food it had ordered on Tuesday from the center.

The other method of ordering from the Food Coop is through its grain store which is located at the Greater Ithaca Activity Center (GIAC), which is open on Mondays 10 a.m. to 12 p.m., and also on Tuesdays and Thursdays from 7 p.m. to 9 p.m. In the grain store are kept such nonperishable items as grains, flour, honey, oil, dried fruits, nuts and teas.

Some foods are bought locally and some food is bought from a Syracuse wholesale market. People known as buyers, go there, purchase the food and send it to the “Tin Can” (the central distribution point), at Stewart Park. There the food is broken down into the individual region orders. There are people there who take care of selling the surplus food. Whatever is not sold as surplus is taken to Storefront to be sold.

Each region is supposed to send one person to the “Tin Can” to break up the food into regional orders. Then the regional food order is brought back to the region where someone else from that region breaks it up into household orders.

There are quite a few jobs which are open to the Food Coop members which must be done in order to keep the four-year-old cooperative functioning in the interest of reasonable food budgets.

For further information on the Food Coop drop by the Storefront, located at 140 West State Street in downtown Ithaca, or call them at 607-273-9012.

With each passing month, the price of food seems to be claiming increasingly large portions of the consumer's income. The first of these articles describes one method employed by some residents and students of Tompkins County to fight the high food prices. The second article is an interview with Dr. Kenneth L. Robinson of the Department of Agricultural Economics, highlighting some of the significant factors that have contributed to the food price dilemma.

Vegetables, bought cheaply with the collective buying power of the Ithaca Real Food Coop members, await sorting at the "Tin Can" in Stewart Park. The Coop members all play active roles in the food distribution.
Countryman: Do you think that food prices in the United States are too high?

Professor Robinson: On a worldwide basis food costs are not particularly high in the United States. In relation to other countries, food costs in the United States are still low, particularly because our incomes are so high. In contrast to lesser developed countries where the population spends 50 percent or more of its income on food, the typical American family spends only 20 percent or less of its total income on food.

Countryman: What caused the upward surge in food prices?

Professor Robinson: 1972 was the turn around point in so far as United States food costs are concerned. It began with the Russian wheat purchases and was followed by livestock prices. With the very buoyant worldwide demand for livestock products, livestock product prices shot up along with grain prices.

Then, in 1973 there were short crops in several areas of the world. This resulted in very high grain prices, which in turn, meant cutbacks in livestock production which accelerated the increase in livestock prices.

Interestingly enough, a lot of commodity prices have come down considerably at the farm level; they have not come down as much at the retail level.

In 1974, increases at the farm level were not so much responsible as were the increases in non-farm costs of packaging, labor, interest, and handling. Last year, roughly 80 percent of the increase in retail food prices was associated with costs beyond the farm.

Countryman: What steps have been taken by the government to combat this inflation?

Professor Robinson: The government is trying to encourage production. Things like higher oil prices, higher food prices, and the general increase in the cost of living mean that workers, school teachers, and everyone else want higher wages, and this is going to get factored into the cost of food. It is very difficult to bring down the rate of inflation as long as the energy, labor and packaging costs keep going up.

Countryman: Why aren't prices in rural areas like Ithaca lower than the food prices in a large urban area like New York City?

Professor Robinson: Most of our distribution in food is sold through chains which have a national purchasing and distributing system. The same food that goes through a warehouse in Elmira, is distributed in Syracuse, Binghamton and Ithaca. Average food prices will vary some but not greatly between communities.

Countryman: How do you handle rising food prices?

Professor Robinson: One can change his diet so as to economize. In general, this means purchasing more low-cost, high energy foods. Comparison shopping is also an important practice. And remember that the more processing the food requires, the more it will cost.
In April, 1828, Ezra Cornell stood on the northern edge of the Cascadilla and Fall Creek Gorges, admiring the view of forests, lake and village below. Twenty-nine years later he purchased this property and turned it into a model farm which he named Forest Park. He soon developed a keen interest in Agricultural Engineering and eventually donated both farm and money to the development of an institution of higher learning, later to be named Cornell University.

Ezra Cornell's "Forest Park" was aptly named. As a lover of nature, Cornell kept his farm abundantly treeed. However, when construction of the university commenced, these trees were ruthlessly eliminated to make way for the new buildings. The raw, treeless campus landscape did not go unnoticed. One day in 1876, a hardworking, unprosperous farmer by the name of Ostrander arrived at Cornell by wagon, and made a generous offer of many young elm trees from his farm. The following spring the trees were planted along East Avenue and gave beauty and grateful shade to that area for nearly 90 years. Mr. Ostrander's idea was taken up with enthusiasm. Enhancing the landscape with elms soon became a practice at Cornell and few new buildings were erected without their accompanying shade trees. The class of 1880 placed a tombstone shaped marker at the corner of East Avenue and Tower Road in commemoration of Mr. Ostrander and his thoughtful gift. Ironically, those elms eventually succumbed to the fatal Dutch elm disease. The disease crept across campus, and one elm after another was stricken. This time people were concerned. While attempts at producing a control for the disease were being researched, other species of trees were being planted. The oaks along Tower Road are a lovely result of this period.

Tree planting still remains an integral part of Cornell landscaping. Mr. Edward Kabalac, Superintendent of the Grounds Division, Department of Physical Plant Operations reports that many new varieties of trees are being utilized. Red oaks line East Avenue, silver and littleleaf lindens grace the Engineering Quad and Christine Buisman elms will soon lend dignity to Sage Avenue. This new species of elm is recommended by the USDA as being resistant to the Dutch elm disease. The trees won't be as arching as the doomed American elm, but they will grow to a distinguished height of 60 feet. Sugar maples and Japanese zelkowas, both noted for their size and beauty are also being planted.

It takes a large tree about 40 years to mature. By the year 2015, the campus will possibly once again be reminiscent of Forest Park.
Come and GO

This 100-year-old Oak (above) spreads graceful branches over Libe slope behind the Willard Straight Theatre. (below) Elms once enhanced the length of East Avenue.

A towering elm (above) still shaded Willard Straight Hall in the 1940's. When the elm was cut in the late 1960's, its trunk served as a kiosk, covered with graffiti (right, above). Last month, vandals cut the five-foot stump down to two feet (left above). A young oak replaces an American elm outside Clark Library (below).
The summer of 1974 held a special kind of excitement for six undergraduates. They spent the summer in Ecuador while participating in the Equador Field Study Program.

The American participants found that they could live and operate in a relatively primitive area with benefit to both their emotional and academic growth. One student appraised the program: "It was the joy I had at being accepted into and becoming part of a very warm and happy family, in spite of the poverty."

Each participant joined a local family near the highland village of Huaca and its nearby villages for the six-week period. "Coca Cola signs marked the small grocery shops and the carcass of a pig marked the local butcher shop," said Brian Moher, a student from the 1974 program, in describing one of the villages in which students stayed.

The Ecuador Field Study is sponsored by a grant from the N.Y. State College of Agriculture and Life Science's Agricultural Development Fund. The purpose of the program is to set up a six-week experience at an experimental station in Ecuador to provide informal contact between Americans and Ecuadorians.

The program was a remarkable success in terms of the cultural immersion of the students in the village. They were very well received by their host families. Some of the families even felt insulted by the compensation of food which the students brought with them, since they had planned on treating the students as guests and had wanted to assume the additional expense themselves.

Accomodations for the students with families ranged from separate bedroom with sheets, mattress, and a bed to "bunking" in the family in their one bedroom.

Each student was asked to write a comprehensive paper analyzing their field experiences in Ecuador. In return for their experience and resultant report, each participant received six hours of credit in the Department of Rural Sociology.

Some of the students made studies of some particular aspect of the Ecuadorian society with which they came in contact. One student carried out a maternity and child care survey, another student did an oral history investigation of a recent successful squatter settlement.

Peter and Jane Gore, co-directors of the program both agree "... that more structured experiences like assigned interviews or side trips could enhance the students' experience." They also suggested "a more detailed orientation period with more comprehensive materials to make the general program goals of synthesizing village experience with past academic course work easier to handle."

As a result of the success of the Summer 1974 program and its evaluation by students and directors, the following tentative schedule is suggested for Summer 1976:

**June**
- 14 Directors open center and consult with families for student placement
- 15 Students arrive for three day orientation in Quito
- 19 Travel to center via Otavalo market
- 20 Local orientation at center
- 28 "Bienvenida" party for students and their "families"

**July**
- 4 Sunday evaluation/relation session at center
- 5 Second week with families
- 11 Sunday evaluation/relation session at center
- 12 Independent "contrast" field trip to jungle or coast
- 15 Return to Huaca and relate experiences
- 16 Third and fourth week with families
- 23 "Despedida" party for students and their "families"
- 24 Travel to Quito
- 25 Evaluation/debriefing and health check in Quito
- 28 End of program. Independent travel or return home

A participant in the 1972 program assessed his cross-cultural experience: "I found a lot of similarities between life in Ecuador and life here. I think that the people of Ecuador can learn some technical skills from the American students that spend time there, and the people of Ecuador can teach the Americans some very important things about life."

All students who are interested in participating in the 1976 Ecuador Field Study Program can contact Ms. Carol Anne Clark at 607-256-3163, for further information about the program. The application deadline is April 15, 1976.
Not so long ago, Ho-Nun-De-Kah, the senior honorary society in the College of Agriculture and Life Sciences, would perform an elaborate initiation ritual each spring. Candidates were blindfolded in the outer hall by three couriers wearing wooden false faces, one holding a turtle rattle. As they entered the chamber, after a loud rattle, the three couriers would offer the yell “Yi Hi, Yi Hi,” to be answered by the men in the council. Then, as the candidates were halted, the President would turn to them and say, “Are you, young farmers, sincerely interested in learning the secrets of the corn growers?”

Ho-Nun-De-Kah has changed a great deal over the last decade, but still it remains a great mystery to many students, alumni, and faculty members.

The history of Ho-Nun-De-Kah dates all the way back to 1908 with the formation of an Agricultural Honorary called Hebs-Sa, an Egyptian word meaning Plowman. This society recognized students for their extra-curricular activities but took no account of their scholastic standing. Then, in 1912, a second honorary was founded called Helios, the Greek word for sun. This competing honorary, founded by an Agricultural student who did not get elected to Hebs-Sa, gave greater recognition to scholarship in addition to extra-curricular activities.

The fierce competition for membership between the societies continued throughout the next seventeen years, declining slightly during the first World War. Finally in 1929, a compromise was worked out and Ho-Nun-De-Kah was born. The organization was formed under the direction of Prof. James E. Rice of Poultry, Prof. Ora W. Smith, then Secretary of the College, and an undergraduate, Samuel Levering, Class of ’30.

When Ho-Nun-De-Kah was founded, it was Dr. Earl Bates, Indian Extension Agent and advisor to the organization in its early years, who initiated the idea of using the Indian phrase Ho-Nun-De-Kah meaning, “Keepers of the Sacred Corn Council Fire”, rather than a Greek name for the newly formed honorary. This suggestion was so well taken that an initiation ritual of Indian character was used as well.

The original purpose of the honorary was to foster more intimate friendships between its members and the faculty, but few activities are directed to this sole purpose today. The trend, since women were admitted in 1967, has been toward making Ho-Nun-De-Kah into more of a service oriented organization. The transition has been gradual but people are increasingly beginning to realize that the combination of scholarship, responsibility, and manpower can be an effective vehicle for implementing improvements in the College.

Candidates were blindfolded in the outer hall by three couriers wearing wooden false faces, one holding a turtle rattle.

Certain activities are traditionally handled by Ho-Nun-De-Kah. This past September, the organization successfully planned and coordinated the twenty-ninth annual Ho-Nun-De-Kah Barbeque to welcome freshmen, transfers, and some scholarship winners and give them a chance to meet with their advisors in an informal setting. The student-parent-faculty reception for graduating seniors the day before graduation in June is also traditional. Another of Ho-Nun-De-Kah’s basic functions has been to supervise the selection of the Professor of Merit Award each spring. The senior class elects the professor who most nearly represents excellence in teaching and advising to receive this award.

This year’s membership of 54 has been quite active in trying to improve academic life in the College of Agriculture and Life Sciences. During orientation week an information tent on the quadrangle was manned each day by Ho-Nun-De-Kah members to answer questions about registration or the College. Working closely with Ho-Nun-De-Kah’s dedicated advisor, Dr. Donald E. Burgett, the membership also successfully staffed an information booth in Roberts Hall during pre-registration week.

Presently, plans are under way to compile a booklet of professors’ evaluations and analyses of their own courses. This booklet would provide students with such information as the number of exams and papers, the general outline of the courses, the grade distribution, the estimated amount of out-of-class work to be expected, and other facts which would reduce the students’ pre-registration quandaries and minimize the inevitable adding and dropping of courses which goes on during the first week of each semester.

This year’s group has been the first to admit a few select juniors into Ho-Nun-De-Kah to provide a measure of continuity through the next year. This will be extremely valuable in light of the advising and evaluation projects which will require follow-up in the years ahead.

These are just a few of the ambitious projects undertaken by the organization this year in its quest to improve both academic life and student-faculty relations in the College. Many people still only associate Ho-Nun-De-Kah with the annual barbeque but we’re confident that our efforts will enable us to emerge from our relative anonymity and dispel the lingering memories of wooden masks and turtle rattles.

*Randy Heller is the 1975-76 President of Ho-Nun-De-Kah
Throughout Cornell’s history, beautiful Beebe Lake has been used for a variety of activities. Cornellians and native Ithacans alike have used it for athletic, recreational, and educational purposes. Recently, many of these activities have been seriously curtailed due to certain natural trends in the lake’s make-up. If the University fails to take decisive action, Cornell’s only lake will revert to its original state—that of a swamp.

While working as manager of Colonel Jeremiah S. Beebe’s flour and plaster mills, Ezra Cornell headed a damming operation which impounded water above Triphammer Falls. Forming present day Beebe Lake, this reservoir provided an adequate supply of water during dry seasons. In 1896, a more sophisticated dam was built which rose ten feet higher than the original.

The creation of Beebe Lake opened the doors for activities which otherwise would not be possible. It has been used for canoeing, swimming, skating, fishing, women’s crew, hockey, and toboggan rides. A toboggan slide was once located on Beebe’s south shore, but due to varying water levels and the growing number of accidents, the administration was forced to close it down.

Beebe Lake has been the site of more than a few practical jokes. In the early 1920’s, Hugh C. Troy, ’95, then professor of Dairy Industry, borrowed a waste-basket from Louis Fuertes, nationally famous painter of birds. This particular waste-basket was fashioned from a rhinoceros’ foot. Professor Troy weighted it properly and tromped across the campus through a layer of newly-fallen snow. The tracks led to half-frozen Beebe Lake and seemingly disappeared into the water. The next day the tracks were identified by an expert as those of a rhinoceros. Since Beebe Lake was then the University’s source of drinking water a large proportion of the campus community refused to drink tap water until the hoax was revealed.

Beebe hasn’t been used very extensively in the past few years. Many activities are restricted today because of silt and clay accumulation. Swimming has been banned due to suspended soil particles in the water, and decreased water levels have limited canoeing to the northern part of the lake—one of the few areas where the paddles don’t touch the bottom.

Sandy Schuman, a natural resources major, conducted extensive research on Beebe Lake in 1973. He determined that Fall Creek carries a substantial amount of silt down to the lake and that the source of much of this silt is the Monkey Run Road region near Varna. Fall Creek’s banks are steep in that area and tend to erode easily. As a result of the dam, the creek is slowed considerably as it enters Beebe, and the sediment carried by the creek settles to the lake’s bottom causing the lake to lose much of its depth.

Pollution in Beebe is evident but there are no definite plans to ease this situation. Experiments have shown that sewage from privately owned septic tanks is being released into Fall Creek and carried to the lake.
Swimming, once a favorite Beebe pastime for students, has been banned due to suspended sediments in the lake.

In the October 21, 1971 issue of the Cornell Daily Sun, Thomas W. Mackesey, then Cornell's Vice-President for Planning, revealed plans to improve four major conditions besetting the lake.

One problem, Mackesey said, was the increasing amount of silt building up behind the Beebe Lake Dam. Besides being unsightly and reducing the lake's value for recreation, silt interferes with the operations of the Chilled Water Plant, located near the dam. The plant pipes water from the lake which is cooled and used to air-condition many buildings around campus.

As a partial remedy, the plant built a forebay in the lake, an enclosure of water that will be kept silt-free. But the lake must maintain a certain water level for the plant to run efficiently. Silt build-up makes this a difficult task.

The steep earth bank bordering the lake behind Helen Newman Hall, the women's athletic facility, has been eroding since the building's construction in 1956. This is more a matter of unsightliness than of danger. Trees have been planted on the slope several times, but without satisfactory results.

The stability of Forest Home Drive, on the south side of the lake, is also threatened by erosion of the south bank.

The fourth problem is the pollution of both Fall Creek and of the lake itself. Experts who have studied the lake tend to agree that it is not significantly polluted. However, conclusive tests are lacking.

At a December 20, 1973 meeting of the Cornell Plantations, Richard L. MacDowell, a civil engineer, outlined the background of the Beebe Lake silting problem. He suggested dredging the lake and building two islands along the northwest shore with this dredged material.

Dredging appears to be the best solution. But subsequent analysis of the silt in the lake indicates that these proposed islands probably wouldn't be stable enough to remain as islands. They would eventually silt back into the lake, putting cleanup operations back where they started. Instead, proposals have been made to relocate the dredged material above the northeast bank, near the Fuertes Observatory.

If the Cornell community wishes to have a lake instead of a swamp, it must be willing to pay the piper. Although the lake has been drained and flushed many times, a complete dredging operation has not been performed since 1928-29. The cost of such an operation is estimated to be about $300,000—a price the university is not able to pay at this time.

Cleanup costs are going to have to be weighed against the deterioration of Beebe Lake's beauty and utility. If a decision is not made soon the lake will make it for us and we will have to deal with a campus eyesore.
Share a WHOLE-WHEAT DOUGHNUT with Your Neighbor

When was the last time you ate a whole-wheat doughnut? According to Dr. Paul A. Buck, Professor of Food Science at Cornell's College of Agriculture and Life Sciences, they are delicious, but very hard to come by. As a matter of fact, many whole-wheat doughnut aficionados congregate annually at the Ellis Hollow Fair Doughnut booth to purchase this nutritional treat. Others have learned the art of doughnutry, and keep their cupboards stocked with this wholesome home-made fare.

"Aside from the difference in taste, the whole-wheat doughnut doesn't seem to be superior to your regular enriched flour doughnut; it has a few added trace minerals and some extra vitamins, but that's all," said Dr. Buck. "Ah—but if you were to calculate these few minerals and vitamins out to a lifetime," continued the professor of Cereal Science and Technology, "you would have a full two-year supply of those given supplements. If you were to extract that many vitamins from your body now, proposed Dr. Buck, "you would die within two years...How can you throw that away?"

Dr. Buck works closely and enthusiastically with his students, continually encouraging them to ask and investigate those areas of Food Science that seem most troublesome. "How much of the health food industry is fraudulent?" students would ask. "Are natural and organic farming agricultural realities, or impractical ideals?" The food science literature provided a lot of opinions but few answers. "Can the art of root cellar storage be revived sufficiently to augment the freezer and conserve energy?" his students wondered. As Food Scientists, Dr. Buck felt he and his class should know if, for example, it is feasible to heat a greenhouse with manure or other agricultural wastes. Not one to be intimidated by vast areas of ignorance, Dr. Buck was prompted by his students' unanswered queries to found Cornell's own Natural Foods Experiment Station, the Food Engineering Lab, in the basement of Riley-Robb.

The Food Engineering Lab is a wondrous maze of wheat germ vats. It is boxes upon boxes of grungy and not-so-grungy just-picked tomatoes, whole-wheat spaghetti machines and freezers full of squashes, beets and chards. It could be a scene right out of Willie Wonka's Chocolate Factory. Dr. Buck, properly attired for work with a white paper cap on his head, sorted tomatoes as he spoke.

"Our agriculture is extremely wasteful," he said. "Not only is a five to ten percent increase in this tomato crop significant, it is worthy and deserving of study. It turns out that the calories supplied in a one-pound loaf of white bread are fewer than those expended in the production, delivery and consumption of that same product. Certainly to swing this balance from slightly negative to slightly positive would not be dramatic. But it surely wouldn't be inconsequential," Dr. Buck explained as he picked up another box of tomatoes. "When you save energy, you are saving lives. When you do this work, you have your grandchildren in mind."

The immediate aim of the Food Scientist is to provide any food to any person at any time anywhere. The concept goes further than providing apples out of season, though this too, is part of it. More important is providing the apple to those who have never seen one before. International Agriculture is a "do unto your neighbor" science, said Dr. Buck. "We should, however, be sharing technology as well as the food."

Current world food problems are high in people's consciousness these days. Slowly, we are coming to the realization that eating the grain is far more efficient nutritionally than eating the cow that ate the grain...which leads right back to Dr. Buck and his class of Food Scientists who try never even to take a carrot from the refrigerator without asking: "What am I costing in terms of energy?"

According to Dr. Buck, Food Science deals with the pathways of food from their start as seeds through to their culmination as nutrients in your body. In part, the science deals with producing tomatoes in January and providing pineapples in New York; creating greater consumer awareness, and tempting you to taste strange new grains like millet, or sorghum, or bulghur; sharing food technology and, of course, convincing your local bakery to carry whole-wheat doughnuts.
Prof. Noland L. VanDemark, director of research at Cornell's College of Agriculture, was recognized by a group of visiting Russian scientists for his contribution to the development of the theory and techniques of artificial insemination in animals. Professor VanDemark is an international authority on reproductive physiology and co-author of the book *Physiology of Reproduction and Artificial Insemination of Cattle*.

Prof. William F. Mai Ph.D., '45 has been elected a Fellow of the American Phytopathological Society. Mai is plant pathologist at Cornell's agriculture college and was recognized for his outstanding professional achievements in the field of plant pathology as well as for his meritorious service to the national organization.

Eric J. Kresse '52 has received a Distinguished Service Award from the National Association of County Agricultural Agents. Kresse, an Oneida County Cooperative Extension agent and resident of Clinton, New York, was honored for designing and implementing successful educational programs within Cooperative Extension activities on a local level.

Prof. Carl F. Gortzig '52, has been appointed chairman of the Department of Floriculture and Ornamental Horticulture at Cornell's Agriculture College for a five-year term. A member of the Cornell faculty since 1965, Professor Gortzig has served as department extension leader with responsibility for the development of extension educational programs in floriculture and ornamental horticulture in New York State.

Karen Schel '76 was elected national president of the student member section of the American Home Economics Association and is the first Cornell student to hold this post. Shelley Page '76 has been chosen president of the New York State student member section of the Association. This double honor of state and national presidents is a first for Cornell.

Al H. Wegener, '56, has been promoted to senior V.P. and director of creative services at Keenan and McLaughlin, Inc., New York. He joined the agency in 1974 and has been V.P. and director of the division of specialized services.

H. Joseph Pendergast '38, was honored with a testimonial dinner on September 5 at Valle's Restaurant in Syracuse. More than 200 dairymen, agricultural leaders and friends attended the event in tribute to the great contribution Pendergast has made to the dairy and purebred cattle industry.

Lee Schar, '74, has recently been appointed Vice President of Marketing for NeuroDiagnostic Systems, a division of Parallel Data Systems in San Francisco. Schar received his M.B.A. from the University of San Francisco last August and is currently marketing a new pulmonary diagnostic machine to hospitals in the West and Midwest.

Prentice J. Favors, '75, recently launched a training program as a public relations and sales representative with R.J. Reynolds & Co., Inc. doing promotion work at the Diana Ross film premiere of "Mahogany" at Lowe's I Theatre in New York. He will present another promotional campaign at the annual meeting of the *Ebony* staff in New York later this year.

Prof. Robert J. Young Ph.D., '53 has been reappointed chairman of the Department of Poultry Science at Cornell for a third consecutive five-year term. He has served as chairman of the department in the College of Agriculture since 1965 and is professor of animal nutrition.

Dairy Cattle Judges Place Second

Stephen Farney '77, Donald Seipt '76 and Timothy Smithling '77 were members of the Cornell dairy cattle judging team which placed second in the Pennsylvania All-American Invitational Judging Contest in Harrisburg. All are students in the College of Agriculture and are coached by Prof. Samuel T. Slack of the Department of Animal Science.

Seed Scholarship Established

The John Zuelzer Memorial Scholarship Fund is being established in the College of Agriculture at Cornell to aid students with an interest in seed and forage crop development. This fund honors the founder of John Zuelzer & Son, a seed brokerage firm in Manhasset, Long Island.

Ag Engineering Awards

Profs. Edward O. Eaton, Edward W. Foss and Everett D. Markwardt all in the Department of Agricultural Engineering in Cornell's College of Agriculture and Life Sciences, have been honored by the American Society of Agricultural Engineers for their achievements in developing outstanding educational aids. Professor Eaton won a blue ribbon award for an educational film on safe operation of bicycles. Professors Eaton and Foss won a similar award for a film entitled "The Safe Use of Crop-Harvesting Machinery." Professor Markwardt won a blue ribbon award for his role as editor of *The Ag Engineer's Notebook*. 
Study Agriculture Abroad and Graduate from CORNELL?

Getting to know another country, its customs, language, people and agriculture can be part of your Cornell experience. If you’re studying in the College of Agriculture and Life Sciences you can apply for study-abroad programs that will let you spend a year in another country, get credit towards your Cornell degree and give you benefits you’ll find hard to measure. Living in another country gives you a depth of understanding you can’t get from books or a short tour.

Under the College’s programs for study in Mexico, Sweden, England or Ireland you can spend your junior year learning about agriculture in these countries (or about genetics, in the Irish program), travelling and learning about the country and its people too.

*Sounds ideal, but how do I do it?*

You can apply in the spring of your freshman or sophomore year if your average is C+ or better. Credit for courses taken overseas is transferable and you’ll usually have plenty of opportunity to learn the language and get to know the people before the program starts. Costs? You’ll have to provide your own transportation but other costs will vary—generally less than for a comparable year here at Cornell. If you want to travel during vacations you’ll probably have to add to your total.

For more information

Still interested? You can get more information from the Office of International Agriculture, 17 Roberts Hall.

As Bill Dalrymple, ’76, the 1974–75 exchange student at the Royal Agricultural College of Sweden at Uppsala says “...it was a great year. I found that the exchange student from Cornell was a "celebrity" of sorts. Complete strangers on campus invited me to their homes, and I got to know students and faculty in small classes where they had a great deal of input into the educational experience."
Can you identify these famous firsts?
With this issue of the Cornell Countryman, we examine some prominent Cornell firsts. Cornellians often forget the many fields that Cornell has ranked number one, or accomplished something first, in. No doubt readers will be as surprised as some of our staff members when they discovered some of the firsts credited to Cornell’s name.
A Brainy Professor...

BURT GREEN WILDER
by RANDY HELLER '76

Cornell University has always been known for its brains. Ever since Andrew D. White, the first president, started recruiting professors in 1867, the Cornell faculty has consistently remained at the forefront of the academic world. But there are other kinds of brains on campus including that of "an erotic German," a murderer, a physician and a poet, a thief, and an alcoholic. All these brains are part of the fascinating and diverse Wilder Brain Collection, believed to be the first and largest collection of its kind in the country.

A member of the faculty from the University's inception, Burt Green Wilder was appointed professor of natural history in 1867. It was President White's firm belief that it was the right and duty of every educated man to possess a knowledge of nature, and especially a knowledge of his own structure and functions, that led to the establishment of the department, and the selection of Prof. Wilder. Wilder received his professional training from the Lawrence Scientific School and the Harvard Medical School, but it was in his gruelling three year tenure as surgeon in the Civil War that he learned how to make a little go far, and little was exactly what he was supplied with.

Starting work with the new institution, Dr. Wilder was at once his own secretary, technician, and assistant. Despite meagre facilities, he insisted on having a laboratory with which to demonstrate the laws of science by example as well as by precept. Much to his students' delight, the general laboratory in McGraw Hall was also Dr. Wilder's private laboratory where his own tireless investigations were conducted in the presence of his pupils. In this manner, it was almost impossible for his students to not become engulfed by his infectious enthusiasm.

Prof. Wilder's eclectic knowledge encompassed many fields which have long since splintered off to form separate departments such as anatomy, physiology, hygiene, zoology, and entomology. Indeed, John Henry Comstock '73, founder of Cornell's entomology department was one of Prof. Wilder's earliest students.

One of Ithaca's most colorful characters, Prof. Wilder hated idleness, prudery, smoking, secret societies, class spirit, and intercollegiate sports. On football Saturdays he would place a blackboard in front of McGraw Hall with a message that read in brief, death to football, its savage players, and imbecile spectators. After the redecoration of Sage Chapel in 1903, Wilder would enter it only by necessity, so outraged was he by the impossible musculature of angels with both wings and arms.

It was his intense interest in neurology that led Dr. Wilder to the study of the brain. His first subjects were cats since the human subject was "inconveniently large, expensive, offensive, and difficult to dispose of." But gradually he began to realize that if the true correlation between the brain and the character of the individual was to be found, a study of the human brain was necessary.

Wilder was particularly upset by the illogical and unprofitable methods that had previously been employed in the study of the brain. "We scrutinize and record the characters and attainments of public men, clergymen, and friends, whose brains are unobtainable," he wrote. "We study the brains of paupers, the insane, criminals whose characters are unknown, or perhaps not worth knowing." But Dr. Wilder was careful not to neglect science for the novelty of having a collection of unusual brains. He was keenly aware of the need for a detailed study of the size, shape, and fissural pattern of brains of "average, intelligent, educated, and moral human beings" so as to establish a standard.

So convincing were his arguments that many intelligent people made provisions that their brains be donated to Dr. Wilder's collection after their death. At the time of his retirement in 1910, he had amassed over 1600 brains, 648 from humans. Forever trying to add unusual specimens to his collection, Wilder once attempted to get an elephant which had died in a circus in Ontario, but customs officials at the border wouldn't allow it across. According to Morris Bishop, in History of Cornell, Goldwin Smith once told Dr. Wilder that he was as welcome to his old brain as to his old hat. Wilder even went so far as to distribute donation forms at alumni dinners.

The world renowned collection reached the zenith of its popularity in the late 1800's when cerebral

Attention Boys!

Every boy can now earn 25 cents and help advance the cause of science.

FIFTY CATS OR DOGS WANTED.

As the lectures of the present trimester will treat chiefly of the embryology of vertebrate animals, especially the new-born, it is desirable that the Professor in charge shall have a large number of cute or dogs specimens.

For the purpose of procuring these specimens, the Board of Trustees, at their last annual meeting, appropriated the sum of TWENTY-FIVE DOLLARS. Twenty five Cents will be paid for every specimen left at the Anatomical Laboratory, in South University Building, on or before May 1st, 1872.

BURT G. WILDER.

Professor of Comparative Anatomy and Zoology.

No. 2-50 specimens will be paid for that are received after May 1st.
morphology was receiving considerable attention in academic and medical circles. But as the twentieth century was ushered in, the hopes of finding a connection between the external characteristics of the brain and personality types dwindled.

Unfortunately, the Wilder Brain Collection recently became somewhat of a headache to administrators in Cornell’s Division of Biological Sciences. The brains, floating in formalin in antique jars, had been collecting dust for years in a dimly-lit sub-basement passage in Stimson Hall, the biological sciences building. A need for space prompted Richard D. O’Brien, director of the division, to ask Edgar L. Gasteiger, professor of physical biology, to launch a study to determine what to do with the once-famous collection. The 1972 study showed that almost half of the brains should be discarded because of “shrinkage, drying, and fragmentation.” Finally, it was decided that eight of the most characteristic brains would be made into a display in Stimson Hall to illustrate an important chapter in the history of neuro-anatomy. The rest of the approximately 100 usable brains were made available to Cornell students for study.

The display which also contains Dr. Wilder’s brain includes historical and scientific notes accompanying each brain. One especially interesting component of the Stimson Hall display is the brain of Edward Howard Ruloff, murderer, who was hanged in Binghamton on May 18, 1871. Ruloff, thought by many of his colleagues to be a genius, was suspected of killing his wife and child, and was convicted of murdering a clerk during an abortive holdup attempt.

Another interesting brain in the Wilder collection belonged to Helen Hamilton Gardener, a prominent women’s suffrage leader who was born in 1853. The donation of her brain was prompted by the statement of a New York neurologist and former U.S. attorney general who contended that a woman’s brain is inferior to a man’s. She willed her brain to Cornell “to provide superior female brains for future research.”

In his later years on the Cornell faculty, Prof. Wilder still retained the vigorous and impassioned style that gave him the reputation of being a superb lecturer.

One of Prof. Wilder’s major aims was the establishment of independent departments with the growth of the university. At the time of his retirement in 1910, all the work carried on by his original department in 1868 was then represented by seven independent departments. What will forever be to Prof. Wilder’s credit is that he deliberately made ready for future expansion and subdivision, without a thought that in so doing his own importance might thereby be lessened. It is fitting that Dr. Wilder’s brain is most prominently displayed in the collection that was his own brainchild. Not only was he one of Cornell’s first professors, he was one of its best.


The First That Didn't Last

The Naked Egg?

by KAY HETRICK '76

“You can use experiments in retail stores to measure people's reactions to products. Then, by accumulating and utilizing these reactions, you can generate new ideas which, in a sense, are being generated by shoppers themselves. You can give them what they want.”

Max E. Brunk, professor of marketing, used this premise in the creation of the shell-less egg, which he and Professor Lawrence Darrah developed in the early 1950's.

In 1952, Professor Brunk had established a series of controlled experiments to study consumers' reactions in retail stores. It was noted that when buying eggs, customers would habitually break into the cartons to check the contents. This instigated a series of inventions concerning cartons with see-through holes, cartons with acetate tops, and completely see-through cartons, all of which proved to be too expensive for commercial production. Another method was to suspend eggs in plofilm cartons. Although it was found that these eggs sealed in plastic kept better, these cartons also were a failure because of the difficulty people had in opening them.

"From here, the logical thought process was to take the shell off," Professor Brunk said. "There were several reasons why a shell-less egg was feasible. Primarily, it would enable the consumer to see the egg in its entirety, and secondarily, it would extend the shelf life of the egg and recover eggs that had defective shells." Since eggs are very disease-prone after being cracked, the shell-less eggs were broken and packed under a “blanket” of nitrogen to prevent contamination. The containers were small squares of transparent plastic, which were usually connected to form rectangles of a dozen eggs each. However, the containers could be torn off singly or in any number the consumer wanted. One big advantage of the shell-less egg was that it could be put into boiling water in its container and cooked to the precise degree desired. The egg could then be eaten from the container.

Once perfected, the shell-less eggs were marketed in an Ithaca area food store for approximately two months. Unfortunately, the idea was given up because of dangers of contamination and high production costs.

"It was a great idea, and attracted a lot of attention because it was so unusual. It was this uniqueness which made it almost impossible to judge consumer reaction. The shell-less eggs sold so fast we couldn't keep them in the stores, but people may have been buying them as curiosity pieces," Professor Brunk stated.

He also noted that the unique aspect of this situation was not in the success or failure of the product, but in the use of self service stores as vehicles for customer communication. It proved that through controlled observation, marketing researchers can discover what customers want. When interviewed, people tended to rationalize their actions. But new ideas for research, packaging and marketing are conceived from watching customers and their reactions in a systematic manner, established on a scientific, rather than a biased base. Although the shell-less egg may not have been a marketing success, unsuccessful ideas often spawn successful ones.

The plastic egg case, above is used for marketing eggs by the dozen. At right, the shellless egg is compared to one with its natural covering.
“Don’t forget the horse doctor,” yelled Ezra Cornell to Andrew Dickson White. Legend has it that this was Cornell’s final instruction to White as he departed to Europe in 1868 to collect professors and materials for their new school, Cornell University.

While abroad, White managed to secure Prof. Goldwin Smith, Oxford historian, and Prof. James Law of the Veterinary College of Edinburgh. Excited about his finds, White wrote to Cornell from overseas. About the Scots horse doctor, who was, in time, to found the science of veterinary medicine in America and establish the University’s world-wide reputation in the field, he said:

I feel sure that he will wear well; he is modest, unassuming, quiet, clear in his statements, thorough in his work and he cannot fail to succeed.

True to White’s description of the modest, unassuming man, Professor Law wrote:

In the event of my having the honor to be appointed to the Cornell chair, it will be my endeavor to prove myself equal to the responsibilities of the position by devoting my whole energies to the advancement of veterinary science.

When Cornell opened, the chair of veterinary medicine was a little room on the second floor of Morrill Hall. A room in the basement was a museum and a pharmacy.

Our clinical building was furnished by the Campus grass walled in by the great Dome of God’s blue sky and watered and disinfected by the life giving rays of the sun and the ozone from the hill and the dale, lake and forest,

reminisced Professor Law several decades later. He did, however, have the distinction of having one of the four microscopes in all of Ithaca.

The inclusion of a veterinary department in Cornell’s original structure was the beginning of an epoch in American veterinary education. It was the first true veterinary science that had been admitted into the curriculum of an American university on a par with history.

Until 1895 and the creation of a veterinary college at Cornell, the only veterinary colleges in America, with few exceptions, were commercial enterprises. As in Europe, they were private ventures whose overwhelming concern with finances led to an inexcusable subordination of educational goals. Success was measured in dollars.

Despite insufficient facilities for his work, Professor Law soon made a place for himself at Cornell. His honest, devoted work and unfailing pervasiveness lent him and his ideas an aura of permanence. Later, President White would comment that Professor Law was one of two or three men who saved the Agricultural College from the ruin:

In the midst of the storms which howled against it due to prejudice, misunderstanding and unreason, his work was triumphantly appealed to as showing that the University was making headway in its efforts to meet the needs of agriculture.

In 1893, Professor Law spoke with “holy anger at the wrongs done to animals by ignorant veterinarians: Their combinations of drugs were as likely to develop poisonous chemical compounds as not, they confounded one disease with another and blundered along so they might draw their fees for attendance, in short they were licensed to poison, maim and slay the flocks and herds of the Empire State, and heartily did they avail themselves of the opportunity.

Early in 1894 the legislators were visiting Cornell for the opening of the dairy husbandry building. After a proper welcome speech, President Jacob Gould Schurman called their attention to the two million dollars that the states of Michigan and California each had given their agricultural schools, and then to the wretched $50,000 dairy husbandry building that was New York’s contribution. The legislators were severely rebuked.

Around this same time too, the public became generally aware that tuberculosis could be transmitted in infected meat and milk. The dread disease was killing one of every eight people during this period. President Schurman reported on it in an Annual Report:

"I well remember the narrow, long lecture room...where we listened every morning at 8:00 to inspiring lectures in comparative anatomy..."
It is the most deadly single disease which attacks the human family. And the method is so equivocal and underhand, its progress so devious and uncertain, its devastations so frightful and so uniform, that it may be described as the pestilence that walketh in the dark.

Roswell P. Flower, then Governor of New York, realizing that numerous animal diseases aside from tuberculosis are also communicable to man, and that public health was in question, agreed that a simple registration and professed love of animals does not constitute a competent veterinarian.

In 1894, according to Governor Flower's recommendations, the legislation read:

There is hereby established a Veterinary College of Cornell University.

Professor Law was appointed its dean and director. It was, Dean White said later:

an outgrowth of years of patient, persistent labor on behalf of a cause espoused, a profession loved and always fought for and advanced with eloquent tongue and fluent pen.

In 1896 the total enrollment was eleven. A large enrollment was not expected. According to President Schurman, the public still had to learn the importance of high grade veterinary medicine. Lung plague in England and the United States had recently caused the countries considerable losses. He felt sure that people would eventually come around:

... (the) experience of loss and disaster will in time teach them that quacks and animals are as good as quacks and people.

The first faculty, consisting of Prof. Veranus A. Moore, '87, Prof. Simon H. Gage, '77, Prof. Walter L. Williams, '94, Prof. Pierre A. Fish, '94 and Prof. Grant S. Hopkins, '89, headed by Dean Law, immediately made the college a leader in its field.

From there, the College expanded. From a comparative perspective, it experienced few restraints. In 1897 Governor Flower contributed $5,000 to fund a Veterinary Library. Four years later Mrs. Flower gave a $10,000 endowment towards purchase of books and periodicals.

That is not to say there was no opposition. The unprecedented and radical increases in the admissions standards as well as the very length of the program were extremely controversial. Nevertheless, in 1908, the year of Dean Law's retirement, a Veterinary Experimental Station was created to house animal and experimental work and a small animal clinic was added the following year. By 1912, the College had an assistant professor of farriery (horsehoeing) and two years later the Department of Research in the Breeding Diseases of Animals was added. At the same time, the College of Agriculture gave the Veterinary College thirty acres of land. By 1918 enrollment had increased another four-fold to 134. The faculty had enlarged to include 30 members.

In the nineteen fifties Dr. Law's fondest dreams were at long last realized: a new establishment for the Veterinary College was planned. Nineteen buildings on 20 acres opened for service in 1958 on the far eastern edge of the campus. Expansion continued. The College's research facilities are constantly being enlarged to cover new and diverse areas. Aside from labs for research on infectious, parasitic and metabolic diseases, there are others for research on reproductive diseases of dairy cattle, leukemia, infectious diseases of the cat, poultry diseases, aquatic animal diseases and sheep and cattle diseases. Teaching, diagnostic/consultation and field research facilities span the state. In line with Professor Law's original aspirations and high professional ideals, today's veterinarian must prove himself a man of character as well as a man of science. He can no longer merely profess an attachment to his pet bird and sign a registration card as in the days prior to Dr. Law's science.

Despite the numerous advances and expanded opportunities in veterinary science, the wisdom of Dr. Law's ever-enduring humility is never outdated; that each contribution and each contributor is, at most, paving the way for another. Upon his retirement in 1908, Dr. Law was deeply honored by the presentation of his portrait to the University by the alumni of the College:

... in grateful appreciation of the character and labors of our honored first director and in token of their personal esteem and love...

Dr. Law's response to the honor was eloquent and humble, fully characterizing the man and the force behind the founding and growth of veterinary science: Those laying aside their armor of life's campaign usually wish that they could have done more. But every man must work in his special environment, and most of us come at last to realize that our environment is not yet prepared to carry out all that we see to be for the best. The wise reformer therefore will often be driven to merely pave the way for others who are to come after him, and if he can prepare and propitiate the public mind for some grand movement and inspire others to be ready to step into the breach at the auspicious moment, his efforts will not be lost.
At Cornell, we have a professor who is as famous in the field of veterinary medicine as Jonas Salk is in the field of human medicine. Dr. Leroy Coggins, whose father never thought he would get through school, holds a Doctor of Veterinary Medicine from Oklahoma University, and the Ph. D. in Veterinary Virology from Cornell. He developed the first low cost, fast, and humane test for the dreaded horse killer, Equine Infectious Anemia (EIA), or swamp fever. In October 1969, this now-famous “Coggins Test” was perfected and since marketed.

Equine Infectious Anemia is a viral disease that attacks horses, ponies, mules, and donkeys. It affects 1½ to 3% of the animals in the Northeastern United States. This disease is transmitted by biting insects, hypodermic needles, surgical equipment, and bridle bits. Once the animal has been infected, the disease incubates for a period of 14 days to several months. If the animal actually develops the disease, it will display the clinical symptoms: fever, depression, depressed appetite, weakness, and in more severe cases, a bloody nasal discharge, and a low red blood cell count.

If the case is acute, the animal can die from such an attack. However, if the case is sub-acute, the symptoms will be less severe and the animal will recover after seven to 20 days. Some horses can recover completely, and remain free from any observable symptoms for years. Once a horse is infected, he will always carry the infectious anemia virus in his blood.

Prior to 1969, it was inconvenient and expensive to test a horse for EIA. Because of the $500 fee for the test, only some horses suspected of being infected were tested. The test was made by injecting a non-infected pony with the blood of the suspected horse, and if after 90 days, the pony displayed the clinical symptoms, the horse was declared infected. If the results were unclear, however, another blood sample was taken from the suspected horse and injected into another pony. If, after another 90 days, the second showed clear symptoms, the suspected horse was definitely infected. The major drawback of this test was the unfortunate outcome of having two or three animals infected.

Because of this inadequate and expensive method of testing, many infected horses were bought and sold, thus spreading the disease. This particularly affected the racing industry where horses command great prices. A buyer might pay $100,000 for a seemingly healthy horse only to discover that under stress of training the horse displayed symptoms of swamp fever. If one horse is infected with swamp fever, not only is that horse lost, but possibly all the other horses in the stable.

*Dr. Coggins performs a simple blood test on horses to determine if they are infected by Equine Infectious Anemia.*
Now thanks to Dr. Coggins, the possibility of buying an infected horse has been eliminated. As of July 1, 1974, the New York State Department of Agriculture and Markets requires a Coggins test six months prior to the sale of any horse, be it a backyard pony or Secretariat. The test is simple, inexpensive and fast. A blood sample is taken from the horse by a veterinarian and then, ten dollars and one week later, the results are ready. If the results are negative, a certificate will be issued to the owner allowing the owner to transport, show, or sell his horse. If the results are positive, the owner has three choices: 1) immediate euthanasia, 2) freeze branding (a painless method of branding and selling for slaughter purposes), or 3) freeze branding the horse with the symbol “21A” and quarantining it in isolation on a farm. Euthanasia is the usual option chosen both for the comfort of the horse, and to stop the possible spread.

There are over 130 labs across the country equipped to conduct the Coggins test. The equipment is relatively simple: specially punched petri dishes, agar (a substance that enables the virus and antibodies to move around freely), commercially prepared EIA virus, blood from an infected horse, and blood from the horse to be tested.

Each pattern of seven wells in a petri dish can test three horses. The center well is filled with EIA virus, and the blood to be tested is placed in three separate wells, leaving an empty well next to each test sample. The infected blood is placed in the empty well, next to the blood being tested; this acts as a test control. If the suspected blood is positive, the blood will contain an anti-body specific to EIA that will form an aggregate with the virus. This aggregate will form in front of the well, and will appear as a continuous line with the control. This line is known as the Line of Identity. If the test is negative, the blood has none of the antibody, and it will form no line. In the photo below, the well with a red arrow pointing to it is the blood of the test horse infected with EIA. Notice that the two other wells with test blood in them have no continuous line; they are negative. Once a person knows what to look for in this test, it is fast and simple to read.

Although the test may be simple to conduct and diagnose, many long lab sessions were spent developing this 100 percent accurate test. Dr. Coggins came to Cornell after developing a similar test for African swine fever. Now that the EIA test has been perfected, Dr. Coggins is working on treatment and a vaccine for the disease. "It's a fallacy that once the virus is isolated the vaccine follows shortly thereafter. EIA virus is somewhat unique in this respect. There are many complexities that require further research," Dr. Coggins said.

One of the most fascinating implications of the Coggins test is its relation to human beings. Since Equine Infectious Anemia is a leukemia-like disease, Dr. Coggins' research could be used to develop a test, or possibly even a vaccine, for human leukemia. "When we find a vaccine for Equine Infectious Anemia, there is reason to believe a similar procedure might be used to find a leukemia vaccine, once the human leukemia virus is isolated," Dr. Coggins noted.

Dr. Leroy Coggins is a professor whose name is on the tip of every horseman's tongue. What does the future hold for this gifted man? A treatment and vaccine for EIA, and with the development, the possibility of aiding in the cure of man's most dreaded disease—cancer.
Do old movies make you nostalgic for the bobby sox days when you could sip a malted for less than a dollar and hum along to your favorite jukebox selection? You'll be glad to know that the '50s have been resurrected on campus by two enterprising Cornell seniors who manage an old-fashioned ice cream parlor in the basement Clara Dickson dormitory.

Joel Shprentz '76 and Hank Colker '77 launched the Dickson Nickelodeon in May 1973 with one pinball machine and 15¢ candy bars. Since then, business has expanded to include two ice cream freezers, a jukebox, fifteen pinball machines, two hand-crank cash registers and...
the soda jerk is back at work

A force of thirteen.
Hired students rotate nights serving a variety of ice cream creations from the traditional banana split to the more innovative pumpkin milkshake. Other items reminiscent of the soda fountain era such as Dr. Pepper and Hershey's chocolate are popular. Brownies, yogurt and beefsteaks are also sold.

If you're looking for a break from the books, the Nickelodeon is a relaxing and tasty spot to spend it. Enjoy this haven while you can. With Apprentz graduating in June, the future of the enterprise looks bleak and the Nickelodeon may become as nostalgic a notion as goldfish gulping air and sock hops.

Those wizards sure play a mean pinball.

"Hurry, hurry step right this way for the most tempting treats ever to tickle your taste buds..."
Another University First

Cornell Lights Up the Future
by ANN VOORHEES '76

If you happen to stroll down Broadway or Fifth Avenue some night, your first impression will be one of flashing neon signs. New York City is famous for its number and variety of lighted advertisements. In a quieter city, the double row of street lights on Main Street directs your eyes down what seems to be an endless journey to the outskirts of town. Everyone is familiar with outdoor lighting, and takes it for granted. If asked where the first electric street light appeared, a typical reply is a shrug of the shoulders and a stab at New York City. If this is also your guess, you're wrong. The first outdoor electric lighting system appeared on the Cornell campus in 1875. The system consisted of two arc lamps near Sage Chapel and was in operation years before similar lights were constructed in any of the large cities of the world.

Cornell's Dynamo

Prof. William A. Anthony, creator of the Department of Physics and head of the Department of Electrical Engineering, is the person who made this possible. With the aid of student George S. Moler, later a professor at Cornell, Prof. Anthony constructed a dynamo based on a magazine description of the one that Gramme developed in Paris. The dynamo was powered by a five-horse power engine and delivered electrical current through underground cables to the two arc lights which lit the campus with electricity while other parts of Ithaca, and the rest of the country, remained lit only by gas. The Associated Press commented on Cornell's electric lighting that "the dynamo marked the beginning of electrical engineering in America and generation of electrical power over giant networks."

The dynamo was adapted from a brief description in a Paris magazine to allow it to do double duty in the physical laboratory as well. Prof. Anthony and Moler made their design with the possible uses of electrical power in mind. At that time, dark rooms and labs were lighted by lanterns supplied with lime light from chemically prepared oxygen and hydrogen gas. Anthony and Moler devised the dynamo so that it could generate the necessary gases electrically. This generator supplied the gas for lanterns used in Cornell's departments for many years. It was in constant use up to 1930, when it was used daily to furnish power to a student shop in Rockefeller Hall.

First Underground Electrical System

The transmission of electricity from the dynamo to the campus arc lights was the first underground distributing system for electrical energy in the country. The underground cables consisted of copper wire insulated by tallow pumped through gas piping. The insulation of the tallow was so great that when the wires were tested more than 20 years after construction and burial, they were still in excellent condition.

"A Four-legged Woman"

The arc lamps were protected by a tower attached to Sage Chapel. However, this tower, which Hiram Corson declared to look like a "four-legged woman holding up her skirts," did not actually accomplish much. One of the lamps itself was described by Prof. Charles H. Hull '86 as "An open arc lamp, and its carbons were not copper cased pencils, but plates, so that the arc, instead of traveling continuously around and around to fit irregularities in the wear, jumped backwards and forwards along their edges from one point to another of approximate contact. Polychromatic flames resulted, startling to behold."

We have made a great deal of progress in the area of transmission of electrical energy. However, do not forget where it all began. Next time you look at a neon sign or walk down a lighted street, try to picture the arc light spurring many colors and jumping back and forth. During the time the arc lights were in commission, Cornell University and Sage chapel must indeed have been "startling to behold."
One of Cornell’s First Ladies. . .

Anna B. Comstock

by ANNE VITULLO ’77

“It is a great place for an education,” exclaimed the young college gentleman, “but if you go there, you won’t have such a gay time as you have had here, for the boys won’t pay any attention to the college girls.”

If Anna Botsford had followed that young man’s advice, and had not come to Cornell in 1874, she never would have met her future husband John Henry Comstock, nor would she have risen to the renown she later did.

Anna Botsford Comstock was a pioneer. She was among the vanguard of women who entered colleges and universities in the 19th century when the education of women in institutes of higher learning was a controversial issue. As a naturalist, she was a pioneer, not only because she was a woman in the male-dominated scientific world, but because she was fascinated by the world around her, and spread her interest and enthusiasm to others.

What sort of woman was Anna Comstock? Morris Bishop, in History of Cornell, described her as a “very intelligent person, decided and humorous, and beautiful even in her old age.”

Her lively interest in the world, and her quest for knowledge stemmed from her early childhood spent on a farm in Cattaraugus County. More than anything else, she liked to read.

In The Comstocks of Cornell she wrote “No book gave Herbert (a neighbor) or me satisfaction until it was shared with the other. We would sit together by the hour, each reading busily to the other. Our parents remonstrated with us telling us to play or visit; we listened to them tolerantly, knowing that they would never understand that we were happiest together when reading.”

After exhausting the educational capacities of the public primary school, Anna was ready for higher education. Because there were no public high schools in Cattaraugus County in 1871, she was sent to Chamberlain Institute and Female College, a Methodist seminary at Randolph. Here she first met Martha Van Rensselaer, little realizing the two would later work closely together.

At Chamberlain a young male graduate of Cornell tried to discourage Anna from attending that university, noting the non-existent social life of college women. Anna’s conclusion to his statements was that “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.”

Undaunted by the stories of the few women at Cornell, Anna Botsford entered Cornell in November 1874, at the beginning of the second term (Cornell was then on trimesters.)

If women were socially ostracized at Cornell, Anna Botsford never noticed it. Things were just the contrary, she noted in The Comstocks of Cornell.

“There were many callers. Some women students came, but more men, naturally enough, for there were few girls in Cornell then. It appeared that my friend of Chamberlain Institute has been mistaken about the ostracism of girls at Cornell.”

In the fall of 1875, Sage College opened its door as the women’s residence hall, and Anna Botsford and her friend Susanna Phelps—later Mrs. Simon Gage—were among the thirty women to live there that year.

It was also that fall she made the acquaintance of John Henry Comstock. The dining hall at Sage was opened to men as well as women, and Comstock frequently dined there with Anna and her friends. At that time, Comstock was employed as an instructor in entomology. A year later he was promoted to assistant professor of entomology.
“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.”

The romance between the student and the professor grew out of their mutual love for science. Their relationship was based on a warm and close companionship. Anna later wrote.

In October 1878, Anna and John were married; she gave up her studies at Cornell to travel with Comstock and help him write and illustrate his books.

By autumn 1882, Anna Comstock had decided to resume her studies and obtain a bachelor of science.

On the advice of President Andrew D. White, she joined Kappa Alpha Theta, the first sorority at Cornell, that fall. White hoped that Anna would have a good influence within the sorority, and would help establish favorable relationships between the other sororities as they began to recruit members at Cornell.

In June of 1885, over ten years after she originally came to Cornell, Anna Comstock received her degree. That year also marked the beginning of her recognition as an outstanding woman in science. Her scientific drawings received first honorable mention at the New Orleans Exposition.

Sigma Xi, an honorary society recognizing outstanding students in the sciences, was formed at Cornell in 1886. Two years later Anna Comstock and Susanna Phelps Gage were among the first women elected to this society.

John Comstock’s first book, Introduction to Entomology, was published in November 1888. He wrote the scientific text while Anna did the illustrations. While traveling in Europe that fall, they received word that the book was selling well. Enthused over the success of their first attempt at a textbook, Comstock began working on his second book, A Manual for the Study of Insects, as soon as he returned to Ithaca.

In 1896 the state legislature voted to give Cornell $8,000 to promote nature study in rural schools. Upon questioning rural school teachers, Anna discovered few knew anything about nature study. With Professors Liberty H. Bailey and George Cavanaugh she wrote a series of nature study leaflets as aids for rural teachers. These leaflets were the basis for her book, A Handbook of Nature Study.

Anna Comstock was named assistant professor of nature study in the Summer School by President Jacob G. Schurman in 1898. Although she was soon demoted to lecturer because of trustee opposition to a woman professor, she was officially the first woman professor at Cornell. (Flora Rose and Martha Van Rensselaer were the first women named full professors in 1911.)

Anna began writing Handbook of Nature Study in 1909. Unfortunately she received little encouragement in her endeavor. Even Professor L. H. Bailey did not think such a book would be a financial success. Much to Anna’s credit, the book has since gone into numerous printings.

In 1913, Anna Comstock was again given the title of assistant professor; this time she kept it. She attributed the promotion to the fact that the faculty of the Agriculture College was progressive and open-minded; two years previously, they had made Martha Van Rensselaer and Flora Rose professors in Home Economics.

“The majority of men graduates was so overwhelming that it seemed hopeless to try to elect another woman to the Board. . . I was indignant that the men were so unfair to the women. . .”

That same year, John Comstock resigned his professorship, preferring to spend his time writing and researching. The following year he was elected an Honorary Fellow in the Societe Entomologique de Belgique.

Anna continued to teach for several years. Her account of her last lecture at Cornell is a touching and sentimental one: “I gave my last lecture before a class of regular students at Cornell. I gave it in the old Insectary—that place of so much excellent scientific work and so much of our happiness in teaching and writing. . . This last day, in the dear old place, gave me the shock that always comes when one realizes that periods in life end as well as begin.”

In 1921, and again in 1923, Anna ran for alumni trustee; she lost both times. She noted in The Comstocks of Cornell that “the majority of men graduates was so overwhelming that it seemed hopeless to try to elect another woman to the Board. . . I was indignant that the men were so unfair to the women. . .”

In 1923, Anna Comstock was named one of the twelve greatest women in America by the League of Women Voters. Martha Van Rensselaer and Martha Carey Thomas ’77, who was then president of Bryn Mawr College, were also among the twelve named.

Anna and John Comstock spent their last years reading, studying and writing. It was their love for their work, and for each other, that made them pioneers and willing contributors in the scientific field.
Prior to 1967, New York was able to keep pace with the amount of wine that was being produced in California. However, since 1967, California has more than tripled its wine production. The sudden surge by the leading wine-producing state in the nation has caused New York State grape growers and winemakers to take more interest in their industry. One of the major factors that has contributed to the California boom is the fact that many dry, arid regions have been successfully irrigated for the first time. This has greatly increased the amount of land there that can be used for grape cultivation.

Grape growers in New York State have no such luxury in terms of land area. Even if there was some new land that could be made available, grape cultivators could not grow as many varieties of grapes because of the cold winter months, as can be grown in California.

Cornell, through the facilities at the New York State Agricultural Experiment Station at Geneva, has been involved in improving and modernizing grape cultivation and processing.

At Geneva, the study of wine making is largely the responsibility of the Pomology and Viticulture Department. It is a department that emphasizes the search for grapes that can produce a higher wine quality. The ideal qualities of a New York State grape are high productivity and resistance to cold.

Several hybrid grapes have been developed at the Experiment Station that are particularly adapted to New York growing conditions. One such grape, a white wine grape, called the Cayuga White and released in 1972, can produce a dry wine of excellent quality. This particular grape is actually a cross between the French hybrid, Seyve-Villard 5-276, and a Geneva grape, the Schuyler.

All aspects of enology, the study of wine, are being researched at the Geneva Experiment Station. Work is being done in such areas as the production of grape concentrates, the microbiology of wine fermentation and spoilage, the evaluation of wine grapes, selections for wine quality, color, and flavor, the causes and prevention of haze and turbidity, and the effect of mechanical harvesting on wine quality.

Cornell research may even help solve the labor problem. A method of harvesting grapes mechanically has been developed at Geneva’s Wine Research Center. This concept presently accounts for more than eight-tenths of the grapes harvested in New York State. It is hoped that with continued research into the problems of wine production and grape cultivation, once again New York will keep pace with California in the production of sparkling wines. The dedicated researchers at the New York State Agricultural Experiment Station are trying to make this idea a reality.

**Testing wine from a new grape variety. Left to right: Dr. N. J. Shaulis, Dr. R. H. Pool and Dr. W. Robinson.**
Cornell's Dyce Laboratory:

A Bees' Nest of Activity

by MICHAEL BROWN '76

When you enter Cornell's Dyce Laboratory for apicultural studies one is instantly aware of honey bees. Not the real ones—they're in another part of the lab—but of all sorts of bee paraphernalia. Most striking is the collection of hive-shaped jars and crockery on display in glass cases. Jars of honey stand on shelves and menacing, but empty, bees' nests hang from the ceiling. The feeling is that of a small honey museum—there's even a guest book near the front door.

The lab's charm doesn't get in the way of its objectives, however. Director Roger A. Morse heads a staff whose work includes research on sex attractants, drone congregation areas, and swarming. One-third of the compound's 9,000 square feet shelters an indoor bee-flight room where temperature, humidity, and light can be controlled for experimental purposes. The rest of the lab consists of a shop room, a chemical laboratory and four offices.

Although all experimentation carried out at the lab is directed toward a better understanding of the honey bee, Professor Morse and his four graduate students are each exploring areas of individual interest. Currently, Prof. Morse is studying the effects of magnetic fields on honey bees. He has determined that a swarm of bees building in an empty cavity creates its combs with the same orientation as the bees of its parent colony. He has been able to alter this orientation by introducing an artificial magnetic field. That the bees are able to detect this field suggests that they use the earth's magnetic field for orientation.

When honey bees mate they travel to regions specified as drone congregation areas. One of the great mysteries in Dr. Morse's research is the discovery that these areas remain the same year after year. That fact is startling when one realizes that drones survive only one season and that queens take only one short series of mating flights. All attempts to discover what draws the drones to these areas have failed. Current research involves measuring magnetic field fluctuations in the vicinities of these areas to determine if the bees are using these as cues.

Mike Rich is a graduate student doing research at Dyce Laboratory. "Currently I am examining the worker reproductive system from an endocrinologist's viewpoint. I hope to discover more about what inhibits or stimulates ovarian growth. Further information on this subject is crucial to a better understanding of social life in the honey bee colony and has implications for the division of labor and evolutionary origins of the insect."

Mike believes bees are excellent experimental animals because they are readily available in large numbers, yet

Prof. Morse and colleague extract bee venom for use in treating persons allergic to bee stings. The venom is administered in gradually increasing amounts until tolerance is sufficiently strengthened.
very complex socially.

"Imagine a colony of up to 50,000 insects living together and cooperating in such a way as to be totally self-sufficient. That is your typical honey bee colony. Perhaps through learning how bees control their sociality, one can gain an insight into man's, or other social animals' interactions."

Pongthep Akatanakul is a graduate of Kasetsart University in Bangkok, Thailand. He received his Masters' degree at Oregon State University in apiculture, and he is currently studying at Cornell under Prof. Morse. He will be going back to Thailand for six months to study the dwarf honey bee, the most primitive of its genus. Pong believes the honey bee to be the most highly evolved insect but he says the history of its evolution is mostly unknown.

"By studying the dwarf honey bee, I hope to relate its evolution to that of the European honey bee, its close relative. Eventually I want to teach at Kasetsart University and to start a commercial beekeeping system—something which Thailand lacks at the present time."

Much of the adult honey bee behavior is controlled by pheromones. These are chemicals excreted externally by an animal that triggers a specific response in the receiving animal of the same species. Rick Fell has been doing research in this area and has some interesting results.

"We have recently found evidence that queen larvae and pupae may produce pheromones which serve for their recognition. We are presently engaged in an attempt to extract and identify a chemical responsible for queen cell recognition. Proof of such a pheromone would help to explain many facets of social behavior that we do not yet understand."

David Dejong is studying chalkbrood—a relatively new fungus disease of North American honey bees. The name stems from the fact that succumbing larvae take on the appearance and consistency of a lump of chalk. Recent research at Cornell has involved looking at modes of transmission of the disease, both within the colony and from one colony to another. It has been found that bees can carry the spores from an infected hive and that environmental control of the bees within the hive has an important influence on the progression of the disease.

"By assaying larvae and testing brood caring behavior of the adults we found a statistical difference in the apparent resistance of different honey bee strains to the ravages of this fungus. This implies that we might be able to take advantage of an inheritable resistance factor in breeding resistant bees."

The Dyce Laboratory is more than a homey museum. It has been, and will continue to be, a leader in the field of apicultural research.
The renaissance of the Cornell Internship Program is at hand. The program, designed to facilitate and coordinate practical field experience for Cornell students, is finally getting off the ground again this year after a five-year absence from the campus.

The Cornell Internship Program, or CIP, was first organized by students in the 1963-64 academic year. Although it was fairly successful during its early years and able to place some 100 Cornellians as public affairs interns in Washington, D.C., New York, and Boston, the CIP was disbanded during the campus disorders in spring 1970.

Today, according to Robert D. Kyle '77, chairman of the CIP, the demand for internships, especially internships during the summer months, is greater than ever. The variety of interests in internships has also expanded, according to Kyle. Internships can now be found in virtually every aspect of public affairs, the law, and business. Kyle says he expects to be able to place students in positions nationwide.

The Cornell Reputation

The CIP hopes to be successful in establishing internships that will be permanently designated for Cornell students. Those internships, Kyle said, would be specially reserved each year for Cornell students only. To do this, Kyle explained, "We are trying to use the institution and reputation of Cornell."

Melissa Grant '77, one of the CIP coordinators and chairwoman of its National Internship Committee emphasized the importance of the Cornell name in interesting prospective employers. "Cornell University's academic achievements in a variety of fields and its encouragement of interdisciplinary inquiry assures its students of an unusually fine preparation for the demands of public service, the law, and the business world. The Cornell student has the needed skills and background businesses, firms, and agencies demand of their employees," she said.

The CIP has also designed a selection process intended to match the skills of student interns with the needs and wishes of employers. "A selection committee of faculty and veteran interns nominates the most talented and best qualified students from our intern pool for positions," Grant said. "Working with cooperating employers, CIP leaders develop and coordinate work assignments to meet the abilities of the intern and the needs of the employers." A follow-up evaluation of the performance of each intern will also be maintained by the CIP "in order to assure the best possible performance of the intern."

Securing Internships

Three methods will be used to secure internships for Cornell students, Kyle said. Of these, Kyle felt Cornell alumni were the most important. The CIP plans to contact Cornell Alumni Clubs throughout the country. Grant explained why: "Cornell alumni span the country as successful businessmen, lawyers, and public officials. They have first-hand knowledge of the Cornell experience."

The CIP will also work with some professional internship agencies. The CIP is already coordinating its efforts with the Urban Corps, which specializes in finding internships for college students. These professional agencies have contacts and branch offices in numerous cities throughout the country.

Individual contacts will also be an important source of ideas for internship possibilities, Kyle said. Such contacts would most likely be located in businesses and public affairs agencies. Although it is a less conventional method, with these contacts the CIP intends to design an internship to meet the specific needs of the employers.

Presently, the greatest obstacle facing the CIP is lack of funds. Douglas Johnson '78, finance chairman of the CIP, said the program will be relying upon the Agency for Educational Innovation (AGEDI) for some assistance, but hopes to obtain additional funds from national foundations. Johnson said that former Cornell interns will also be contacted because many of these people received loans from the former internship program.

Kyle urged those interested in being an intern candidate or employing some Cornell interns to contact the CIP office at the Career Center, 14 East Avenue on the Cornell campus.
Former Dean Honored

Charles Palm, (Ph.D. ’33), Liberty Hyde Bailey Professor of Agricultural Sciences in the College of Agriculture and Life Sciences, has received the New York Farm Bureau’s Distinguished Service Award. Professor Palm was Dean of the College from 1959 to 1972. Presently, he serves on the Agricultural Board of the National Academy of Sciences and is chairman of its Committee on Plant and Animal Pests.

Ellis A. Pierce, (Ph.D. ’55), associate professor of animal science, has retired and been named Professor of Animal Science Emeritus. Dr. Pierce is a specialist in swine, beef cattle and meats at the College.

Howard Sidney, ’41, has been named acting Academic Dean at Cobleskill Agricultural and Technical College. He previously had been chairman of the Division of Agriculture and Natural Resources. Sidney is also a member of the Board of Directors of the College Alumni Association.

Daniel H. Fricke, ’58, has received the Distinguished Service Award from the National Association of County Agricultural Agents. Fricke is a cooperative extension agent for Suffolk County in Wisconsin.

Frederick K. T. Tom, (M.S. ’52, Ph.D. ’54), has been named Professor of Education Emeritus by the Cornell University Board of Trustees upon his retirement. Professor Tom was appointed to the faculty of the College in 1955. While at Cornell, he was assistant director of foreign student orientation and field representative for education in the Graduate School.

Peter L. Marks, assistant professor of ecology and systematics in the College’s Division of Biological Sciences, has been honored with the George Mercer Award of the Ecological Society of America. The award was made for Marks’ studies of the role of various tree species in maintaining the stability of northern hardwood forests.

Charles H. Riley, Jr., ’38, has been elected President of the New York State Agricultural Society. The position carries with it the responsibility of serving as a Cornell University trustee. Riley is a former president of the College of Agriculture and Life Sciences Alumni Association.

Directors Named For Food Science Institute

Willard B. Robinson, professor of Food Science and chairman of the Department of Food Science and Technology at the New York State Agricultural Experiment Station at Geneva, has been named head of the Institute of Food Science at the College. Professor Richard A. Ledford, chairman of the College’s Department of Food Science, was appointed associate head of the Institute. Both were appointed for five-year terms, W. Keith Kennedy, dean of the College, announced.

Agricultural Economists Honored For Research

The Ph. D. thesis of Dennis R. Lifferth, an assistant professor in the New York State College of Agriculture and Life Sciences, was honored as one of the most outstanding in the field of agricultural economics at a recent meeting of the American Agricultural Economics Association. The thesis analyzed a new, rail-based, distribution system for grain. Also honored at the meeting for their research on the egg industry, were Olan Forker, professor of marketing, Meir Chayat ’71, now with the Ministry of Agriculture in Israel, and Daniel Padberg, a former member of the College’s Department of Agricultural Economics and now at the University of Illinois.

Randall D. Pratt, ’77, has been presented with a scholarship award of $3,360 by the Commodity Exchange Center, Inc. The award is made on the basis of character, initiative, leadership, scholastic ability, and the promise of making a substantial contribution in agribusiness. Pratt is majoring in agricultural economics at the College of Agriculture and Life Sciences.

Marya Dalrymple, ’68, has been named an Assistant Editor of Horizon Magazine. She was a communications arts major while studying at Cornell.

Murray A. Death, ’67, has been named director of the Cornell Fund. He has been acting director since September. The Cornell Fund is the University’s annual campaign for unrestricted gifts from alumni and friends. Death was an agricultural economics major while at Cornell and played varsity hockey for three years, becoming co-captain in his senior year.
Summer on Appledore Island

Uninhabited Appledore Island, home of the Shoals Marine Laboratory, is located well at sea in the Gulf of Maine. It is a registered national historic site and is being considered as a protected heron rookery of the State of Maine. The Laboratory has immediate access to a biota of unusual richness and diversity which can be studied under conditions free of human pollution and mainland distractions. The instructional program is housed in a new, well-equipped laboratory building, but living accommodations are primitive.

The Shoals Marine Laboratory will add several advanced courses to its basic offering, Introduction to Marine Science, during the summer of 1976. These include invertebrate embryology, field phycology, functional anatomy of the gull, and diving instruction for scientists. Presented cooperatively by Cornell University, State University of New York, and University of New Hampshire, these courses are designed primarily for undergraduates, but others such as teachers for whom they may fill a particular need may also apply. In cooperation with Sea Education Association, SML will also sponsor students for a Sea Semester, including a research voyage aboard the 100 ft. topsail schooner Westward.

In keeping with the rich historical and literary heritage of the Isles of Shoals, SML will offer a number of brief adult education programs and a formal course in poetry and poetics in 1976.

Information on all courses may be obtained after January 1 from: Shoals Marine Laboratory, 202 Plant Science Building, Cornell University, Ithaca, N.Y. 14853.

New York State College of Agriculture and Life Sciences, a Statutory College of the State University, at Cornell University
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About the issue:  The feed bag held by Prof.  
Emeritus Stanley Warren is just part of his exten- 
sive collection of farm tools.  This hobby is only  
one of the many diverse interests of our faculty.

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Professors, like students, have diverse interests which are worth discovering. When you drive up Hanshaw Road, you may notice a house number mounted on a strange wheel-like object. The person to whom this curiosity belongs is Emeritus Professor Stanley Warren, who was in the Department of Agricultural Economics from 1933-1972. I turned in his driveway recently and was almost immediately transported into a different time.

The strange object which serves as a mount for the house number is an old bone grinder. Farmers used to use this to grind up bones to add to the chicken feed. The bones provided the calcium needed for formation of hard egg shells before chemical additives were even considered.

You might ask why Professor Warren has such a tool, but don’t stop there. Professor Warren has been gathering old farm tools and implements for many years, and his collection is astounding. Most of the objects were purchased from auctions, but many were given as gifts from friends and acquaintances who knew of his interest. Professor Warren started collecting farm tools for the fun of attending auctions and because of an interest in history which stems from his school days. He collects things that he used himself, or that he saw being used so that his grandchildren can see what a tool looks like when he tells them stories about farming.

When I arrived, Professor Warren led me to a one-roomed structure behind the house. A wooden yoke hangs on the outside wall, and a pair of what he called hames is suspended over the door. He promised to explain what they were when we got inside. As he opened the door, I saw that the room was filled with strange-looking old farm implements. They were on the walls, stacked on shelves, and standing on the floor. One side of the room was devoted to things dealing with horses, and the other to things concerning the dairy industry.

Professor Warren drew my attention to the horse side of the room. “I have set up a variety of horse accessories as if the horse were standing in them,” he explained. “That way, it’s easy to picture what the various things were used for.” He gestured towards another pair of hames on the horse display. They were placed on the collar which went around the horse’s neck, and were the place of attachment for the traces. A sort of blanket made of thin strips of leather unattached at the bottom ends was thrown over what would be the body part of the horse. Professor Warren explained that this was a fly net. The strips of leather swung back and forth as the horse moved, keeping the flies from landing.

As we moved around the room, Professor Warren pointed out various tools, explaining their use. He was eager to share his knowledge and interest in the objects he had collected, and had a seemingly endless reservoir of stories to accompany each item that he mentioned.

We stopped in front of a number of butter churns.
Each was different in model or theory. Professor Warren feels that there was such a variety of churns because it took one-half of an hour to turn cream to butter. "That's a lot of time for a man to sit and think that there must be a better way to do the job," he said humorously. "That's what makes Americans different from people in other countries. Instead of looking back to see how their grandparents did things, they look ahead to find a better way." Here was an example of American know-how and drive found in a collection of outdated machines.

Some of the objects reflected the changing trends in farming through the years. Professor Warren showed me a collection of milk containers starting with different types of bottles and ending with a modern day carton. One bottle was called a "cream top" bottle and had a bulge in its neck. It was for the cream which separated out of the milk. Professor Warren explained that people used to want the cream, so farmers raised cows such as Jerseys which produced milk with lots of fat. Today, people want more 99 per cent fat free and skimmed milk. The Holstein is used the most since it produces less fat in the milk. "Maybe the farmer doesn't agree that the skimmed milk is the best part," said Professor Warren, "but consumers do and that's what the farmer needs to know."

On the shelf over the milk cartons was a mechanical milker with its own storage tank. This type of machine is still being used on some farms today, although new milkers which are connected directly to the main milk tank with pipes are taking over its job. Professor Warren is one of the few people who collects farm tools which are gradually becoming outdated. "I collect these things because today's tools are tomorrow's antiques," he explained.

We left the room and walked back towards the house. Professor Warren told me about some of the auctions he attends. He started this year's round of auctions on January 1 and plans to attend around 70 in 1976.

Inside the house, Professor Warren led me to the living room. Small objects were scattered about and mounted on the walls. An old medical book with descriptions of mid-wife techniques and treatments of all types of diseases was on a nearby table. Professor Warren bought it as a part of a "wonder box", a box of unknown objects sold at an auction to the highest bidder. "Do you know why they call it a wonder box?" he asked. "Because when you get it home and open it, you wonder why you bought it!"

Professor Warren told me a little about the background of his collection while he fingered a piece of metal with an attached labeled tag. It was a corn husking peg which had been given to Professor Warren by one of his old students. Many of his tools came from similar sources and are labeled with the name of the giver and his class.

When Professor Warren retired in 1972, the Agricultural Economics department gave him a party that was different from the standard retirement gathering. The coordinators of the party had contacted one person from each of Professor Warren's 40 farm management classes and all had come, bringing gifts of old farm tools.

Too many of us tend to regard our professors as one-dimensional objects from whom we should drain as much knowledge as we can. Professor Warren is a good example of the rounded, interesting people that instruct us here at Cornell. Whenever you start thinking of your professors in terms of course work only, remember the strange-looking bone grinder that serves as a house number mount on Hanshaw Road.
What is now known as “Ithaca’s only morning newspaper” was almost called the Cornell Star. Perhaps it should have been—its daily arrival, in the early days was a lot closer to sunset than sunrise.

The founding fathers of the Cornell Daily Sun were quite undecided between the names Sun and Star for their brainchild. Eventually, the Sun won out, as the paper was to be in the hands of its readers before 11:00 a.m. As it turned out, the Sun rarely shone on the streets of Ithaca before mid-afternoon, usually after 3:00 p.m.

Late delivery was only one problem the launchers of the Cornell Sun faced. Another was a barrage of scathing attacks from the established weekly publication on campus, the Cornell Era. The Era had existed as long as the University. Editors of the Era greeted Vol. 1, No. 1 of the Sun with scorn:

“One day last week as we went down the hill, we were set upon by a band of boys who looked like youthful highwaymen, each carrying a number of diminutive papers.... We extended a hand, expecting to have it filled with interesting literature, but instead were greeted with the shriek, ‘Cornell Sun 3 cents.’ We bought one and soon learned by a glance at the little sheet... that a half-fledged daily was trying its wings at the University.”

The reference to the original Sun’s diminutive size came from the fact that it was printed on pages measuring only 9 x 12 inches. The Era further charged that the new paper was a private enterprise put out by a self-elected board of editors who were not students. The Era explained that the list of editors which appeared on the third day of publication was comprised of “deluded persons” hoodwinked by the “crafty” business manager of the daily, G.F. Gifford ’80.

The Era’s charge that non-students operated the new daily was only slightly true. Gifford had graduated the spring before. In fact, he had been the business manager of the Era during his senior year. During that year, he and another Era staffer, William B. Hoyt ’81, cooked up the scheme to launch a daily. Hoyt originally conceived the idea but he needed Gifford’s advertising and business contacts to found the Sun. The two discussed the idea through the late winter and spring of 1880. Before graduation exercises, they had come to the conclusion that the project could be done. They contracted with the printer Andrus and Church, on State Street, for publication the following fall. The same firm printed the Era.

Gifford remained in Ithaca that summer to secure advertisements for the coming school year. He did his work well—in the first issue (Sept. 16, 1880) the publishers could boast, “(Our) financial success is already assured.” Gifford had put together enough advertising commitments to fill the Sun for the entire year.

Hoyt, who became the first editor-in-chief, returned to Ithaca early to recruit a staff of “class” and “fraternity” editors, all of whom were undergraduates.

Another editor, George Beebe ’82, remembered how the staff gathered many of the news items. “We diligently scanned all the bulletin boards on the hill for news and searched the hotel registers for arrivals of Cornell alumni.” Beebe, in a 1930 retrospective, said that it was Hoyt who wrote most of the lead articles for the Sun in its founding year.

Mindful of the small student population at the University (enrollment in 1880 was less than 400), the promoters of the Sun circulated notices in early September advising townspeople and alumni of the forthcoming publication:

“The paper will be devoted to the collection and dissemination of Cornell news, together with a brief daily epitome of the other universities.”

Although the original issue was eight pages long, the Sun settled into a four page daily format. The pages were divided into three columns, with the left-hand one reserved for advertising on the front page. The daily content of the Sun in 1880-81 consisted primarily of editorials and personal notes of what students and alumni were up to. White space was filled with accounts from other college papers.

The Sun scored one journalistic victory over the Ithaca Journal in its founding year: it was the first paper to hit the streets with the news that Garfield and Arthur had won the Presidential and Vice Presidential elections.

After graduating, Hoyt left the journalism profession to become a prominent Buffalo attorney and U.S. district attorney for northern New York.

Gifford, the “crafty” business manager, stayed with the newspaper business. He later managed the St. Paul Globe and wrote for the Chicago News.

The last editorial for the Sun’s first year explained that its founders, “endeavored to make the Sun not only a representative of, but a necessity to, the University... we have little fear that the Sun will not become permanently established, if it passes a second successful year...”

In a few short years, the Cornell Sun will be a century old.
Pickled palms. Computer terminals. Art studios. Dried plants. And, of course, books. You'll find all this and more inside the Albert R. Mann Library, the official library for the College of Agriculture and Life Sciences and the College of Human Ecology.

This imposing complex serves as an important resource center for both the Cornell community and the public. Unlike other libraries on the Cornell campus, Mann Library houses a herbarium, a horticultural, communication arts facilities, freehand drawing studios, classrooms, and business and financial offices as well as typical library fare.

According to Henry Murphy, Librarian of Mann Library and Assistant Director of Cornell's Statutory Libraries, Mann Library contains about 470,000 books and periodicals on topics from agronomy to textile technology. Mr. Murphy points especially to the "birds and bees" collections made possible by special endowments. The "birds" collection is the James E. Rice Memorial Poultry Library which contains 4,500-5,000 volumes. One of the most complete collections of poultry husbandry books in the world, the library was established in memory of James E. Rice, the first professor of poultry husbandry at Cornell.

The Everett Franklin Phillips Beekeeping Collection, named for a former professor in the Department of Entomology, contains both ancient and current volumes on the science of beekeeping. The almost 5,000 books include rare publications from as long ago as 1579. Donations from some local beekeepers, who set aside the profits gained from particular hives, and royalties from a honey patent allow for the continuous acquisition of both new and old books.

One of the most recent innovations at Mann Library is the use of microfiche—4"x6" sheets of microfilm that can be read from special reading machines. A special research center, ERIC (Educational Resource Information Center) which offers computerized retrieval of bibliographic citations and abstracts in the field of education, is completely printed on microfiche. Microfiche is so much easier to use than coiled microfilm and because it is in flat sheets it can be filed and stored more efficiently. Students like its flexibility since the microfiche readers are portable and simple to operate.

Another of the exciting resource centers in the library is the SUNY biomedical communications network terminal. This terminal linked with the main computer in Albany provides on-line bibliographic information on psychology, biology, education and medicine.

But the agriculture library at Cornell has not always been a progressive resource center. The first library was established in the basement of Stone Hall in 1915. This single room facility was inadequate to say the least. "Students had to climb ladders to reach books in the crowded room that was illuminated by naked electric light bulbs on extension cords," says Mr. Murphy.

Dean Albert R. Mann recognized the importance of a good library to quality education. In 1923, he called for a campaign to secure funds for the construction of a "real" library. However, Mann did not receive much support for the next 20 years due to differing priorities of the trustees and bad economic conditions. But in the postwar prosperity of the late 1940's an appropriation was finally made for the construction of a library.

After three years of construction, the new library was completed in the fall of 1952. The new structure was named for the dean who had worked so hard to procure a decent library for agriculture students.

Today Mann Library is widely used by students and faculty from all across the university. One of its busiest facilities is the reserve desk which loaned 39,000 volumes in September of 1975 alone. A recent trend has been toward increased usage of the reserve desk early in the semester—long before exams roll around. Mr. Murphy sees this as a reflection of stronger motivations.
on the students' part but concedes that economic pressures may be forcing professors to put greater numbers of books on reserve than ever before.

Budget cuts which have plagued many university facilities have not cut too deeply into Mann Library's operations. Although prices have almost doubled in the last ten years, acquisitions have diminished only slightly during that time. Most cuts have been absorbed by the scarcely used foreign language periodicals such as Russian and French.

Mann Library was not planned for library use only. Specific space was set aside for the Bailey Hortorium, Wiegand Herbarium, and other botany facilities. Other office space was later consumed by communication arts and business offices.

Dried plants and botanical volumes inhabit the Bailey Hortorium. Liberty Hyde Bailey, an outstanding figure in Cornell history, coined the word hortorium as "a place for the scientific study of garden plants, for their naming, for their classification, and for their documentation."

Bailey donated his private herbarium and library, which make up the Hortorium, to Cornell in 1935 as a way to expand the university's research in horticultural systematics. The Hortorium's recent activities include the preparation of a new dictionary of cultivated plants, botanical instruction at the undergraduate and graduate levels, and other taxonomic research.

Huge metal cabinets house the 360,000 dried plant specimens in the Hortorium. One large room is filled completely with dried and pickled palm specimens, many of which were collected and preserved by Bailey himself. The hortorium also contains over 10,000 volumes of important botanical references.

Down the hall from the Bailey Hortorium is another "library of plants"—the Karl M. Wiegand Herbarium. The herbarium is a self-contained unit of botanical research and teaching, named for Karl M. Wiegand, Chairman of the Dept. of Botany from 1913-1941.

Adelaide Briggs, preparator at the herbarium, describes the collection of dried plants as "concentrating more on wild plants. Our collection covers a complete range of plant types mostly from the Northeastern United States but we do have plants from around the world. About 320,000 dried specimens are presently in the herbarium and 200,000 more are unmounted."

Teaching is the main function of the herbarium. A laboratory collection and classrooms serve botany students. The facilities, including storage areas, a drying room, and a preparation room, are open to the Cornell community for use in research concerned with plant comparison, identification, and ecology. Visitors are also welcome at the herbarium.

File cabinets aren't the only place you'll find plants in Mann Library. Beautiful African violets, donated and cared for by retired staff member Sellman Woollen '14, are scattered throughout the stacks and offices of the library.

The late Albert Mann would be proud of the diversity displayed at the library that has grown from a small room in the basement of Stone Hall to a large multi-use complex on the Agriculture quad—Mann Library.
Is there anything worse than Ithaca weather? This question is asked frequently by Cornell students, especially when they’re walking up an icy Libe Slope, or waiting for the campus bus in the rain, or running to a late class while battling the gusty winds.

Ithaca is certainly not the climate capital of the world, but, believe it or not, there are worse places. Are you bothered by the long winters that Ithaca is so famous for? You could be in Cheyenne, Wyoming, where the first frost comes September 27 and doesn’t leave until May 23. And the next time it seems unbearably cold, think of the people of Vostok, Antarctica, who must endure temperatures as cold as 127 degrees Fahrenheit below zero. There is no disputing the fact that Ithaca has more than its share of rainfall, but we could live on Mt. Waialeale, Hawaii where it rains over 460 inches a year. Or for those who like the rain, and don’t see enough of it in Ithaca, take a trip to Arica, Chile to see what dry really is—it rains a scant 0.03 inches a year there. When you are running to catch a late class and the wind is making your efforts seem fruitless, consider what it would be like running against 231 miles per hour winds on top of Mt. Washington in New Hampshire. With the summer on its way, we recall those beautiful sunny days when there is nothing better to do than soak up those penetrating rays. But what about those summer days that are so oppressively hot? Things could be worse; you could be sweltering in the 136 degree weather of Al’ Aziziyah, Libya.

So the next time you are walking up Libe Slope, battling the ice, wind and snow, and your friend turns to you and says “Is there anything worse than Ithaca weather?” answer “Yes, there is Cheyenne, Wyoming and Mt. Waialeale, Hawaii and Vostok, Antarctica and...”
EVER

THE

WEATHER...

IT'S ITHACATING!
Woodworks
by JEFF MARSON '77

To most students he is known simply as Dr. Daniel Sisler, Professor of Agricultural Economics. But to those fortunate enough to become acquainted with his personal life, Prof. Sisler is also a master craftsman who has cultivated his hobby of woodworking into a fine art.

As someone who inherited his interest and talent for woodworking from his father (a farmer who made furniture for the house), Professor Sisler engages in a wide variety of activities ranging from the making of small table bowls to the difficult task of constructing light fishing boats which are actually used in the Adirondacks.

Because he is blind, one might expect Professor Sisler to face insurmountable difficulties in successfully conducting his woodcrafting activities. Yet, as was revealed by a visit to his home shop, Dr. Sisler has acquired a high degree of competence in working with anything from a simple whittling knife to a high powered lathe.

As one enters the Sisler shop (attached to the garage) he is immediately impressed by the vast array of machinery and tools on display. Located in their own distinct areas are a functional drill press, a precision-cutting miter saw, as well as a router, jointer, and sander. In addition to these machines, one notices a wide assortment of hammers, screwdrivers, saws, and all the other hand tools that are so vital to the serious craftsman.

Though the professor makes use of all the shop's equipment, the majority of his time is centered around the lathe. On its rotating spindle, he is able to make beautiful bowls and tabletops from a fine selection of maple, cherry, walnut, and other woods. On occasion, he receives elegant tropical woods from friends and former students who are located in various exotic areas around the world. As a result, he produces a variety of objects that would grace any home, no matter what the decor.

Even though one might question the practicality of a blind person working with a machine such as the lathe, Dr. Sisler insists that with the proper technique, executed with care, all possible hazards can be eliminated.

As he operates the lathe, the professor holds the cutting tools with one hand and lightly places the other one atop the revolving wood. By using this method, he can feel the various patterns and shapes emerging without even "nicking himself." Thus, whereas the sighted person relies on his sight to see what he is producing, Professor Sisler depends on his sense of touch to determine exactly what is happening to the spinning wood. And, by the looks of the beautiful end-products, it is apparent that this technique is, indeed, a functional one.

But Dr. Sisler's dexterity doesn't end with the lathe. As he moves around the shop, it becomes evident that he has gained a certain amount of expertise with other

Professor Dan Sisler fitting a piece of wood into a frame for a light fishing boat he's constructing.

Still far from an expedition in the Adirondacks, Prof. Sisler's replica of a 19th century boat takes shape.
Combining his imagination with a keen memory, Prof. Sisler has produced some beautiful “free-form” objects.

By relying on his sense of touch, Prof. Sisler has become a master of the lathe.

By relying on his sense of touch, Prof. Sisler has become a master of the lathe.

woodcrafting machinery. Of particular interest is the fact that he always attains the precise setting for his drill press, so that he never makes the common mistake of drilling too deep into the wood or, more significantly, the metal table itself (that part of the drill press which supports the wood). Dr. Sisler does this through the use of dividers and a braille ruler which enable him to make the appropriate settings for the drill's depth. Once he has attained the desired setting, he simply adjusts the “stops” to their correct positions and then begins his work.

In addition to making bowls and tabletops, Dr. Sisler indulges in the art of whittling. Relying mostly on memory, the professor employs a “free-form” style in carving out owls, large fish, and even whales, often with amazing detail. On occasion, he brailles over certain art objects which he later attempts to replicate in his shop. However, Dr. Sisler usually prefers to use his own imagination whenever he creates these miniature figures.

But amidst all his woodworking activities, there is one in particular that demands only the finest artistry and skills. That activity, as the professor explains, is the art of restoring and building boats.

As a boating enthusiast, Dr. Sisler has focused his attention on the fishing boats that were used in the late 1800's. Guideboats, as they were appropriately called, served as vehicles of recreation for the wealthy during the latter part of the 19th century. As Professor Sisler relates, affluent members of society would travel up to the Adirondacks for the weekend and hire a guide to row them around the lakes until they located a good fishing spot. Afterwards, the two would prepare and cook the fish and then, perhaps, partake in a friendly game of cards in order to pass the dark hours away. All in all, it was a form of recreation that was reserved only for those who could afford it. However, one can find similar activities taking place on safaris, where guides perform coinciding services for hunters.

Over the past several years, Dr. Sisler has restored several of these boats. Because they are such an important part of the American heritage, they are considered collector's items. Although he has retained these boats for his own use in the past, Professor Sisler is currently considering selling replicas of them to various parties in the area.

Since he is both a woodworker and boat connoisseur, Dr. Sisler's passion for working with small vessels was not completely satisfied with just restoring them. So, in order to appease his desires, the professor decided to go about the difficult task of constructing his own fishing boat. Thus, with the use of brailled rulers, yardsticks, and protractors, as well as a router (used for precision cutting), Dr. Sisler, with the aid of his two sons, is in the process of finishing a boat that is fashioned after a derelict skiff which was discovered during a recent vacation. When completed, the boat will be used for family fishing expeditions in the Adirondacks.

So, the next time you happen to be strolling around the Finger Lakes and notice an old-fashioned guideboat gliding gently through the water, don't be alarmed—it'll only be Professor Dan Sisler and his eager family taking an authentic 19th century fishing trip through the “wilderness” of New York state.
1 1970— Africana Studies and Research Center burns to the ground. After an exhaustive investigation, arson was inconclusively believed to have been the cause.

7 1828—Ezra Cornell, standing "high above Cayuga's waters", discovers the site which was later to become Cornell University.

10 1975—In a series of unsolved mysteries, a storage cooler in the basement of Balch Hall was ransacked. Among other delicacies, a 27 pound turkey was abducted.

13 1972—The "Anything That Floats" race, held in the icy waters of Fall Creek, attracted some 30 odd crafts ranging from inflated bags to a horse trough.
16 1975—Cornell University participated in World Food Day. Many students fasted to illustrate the plight of the world’s starving masses.

18 1969—A burning cross thrown onto the porch of Wari, the Black Women’s co-op, leads to the takeover of Willard Straight Hall by some Black students.

26 1917—A Cornell co-ed was caught smoking a cigarette in a dormitory bathroom. The Administration expelled her for this unlady-like indulgence.

27 1865—Cornell University became chartered, making it a recognized institution.

1972—Anti-war demonstrators took over Carpenter Hall.
ON A SLOW BOAT TO LENINGRAD

by ELISABETH VARAK '77

If you were invited to the Xllth International Botanical Congress in Leningrad, how would you get there? Peter J. Davies, associate professor of Plant Physiology at Cornell’s College of Agriculture and Life Sciences, decided to travel the last 1200 miles of the journey by sailboat last summer.

Davies, who was born just outside of London, has acquired quite a reputation for traveling in unconventional ways. When he flew a small plane to a conference at Brown University, a colleague remarked, “I don’t believe that your arrival could have been more novel—unless you had arrived in a hot air balloon.”

Professor David Richardson, a botanist in Canada, had written Davies about his recent acquisition, a 32-foot sailboat that he had purchased in England. When it appeared that both men would be attending the Botanical Congress in Leningrad, Professor Richardson suggested that the trip would make an ideal maiden voyage for the 10-ton vessel. Although the sailboat was designed and equipped to sail the Atlantic, the time factor dictated that they fly to London and set sail from there.

Even though the trip was scheduled to take only two and a half weeks, the boat was stocked with enough food and water to last six people for six weeks. The well-equipped crew of four embarked on their journey from Chichester Harbor.

Travel was sometimes slower than planned. One of the passengers developed sea sickness and had to be dropped off in Lowestoft, England. A few times in strong winds the boat reached its maximum speed of seven knots (about 8 miles per hour) but frequently it dropped below 1-2 knots and they were forced to turn on the engine because of the time factor.

The North Sea, which has a reputation for violent and sudden storms, posed no major problems. Just the same, they were prepared for the worst. “The North Sea is relatively shallow compared to the ocean,” explained Professor Davies, “and the ever-present threat of gale winds makes it rather dangerous.”

An unusual delay occurred at the Kiel Canal—connecting the North Sea with the Baltic Sea at the northern tip of Germany. As they entered the canal, the canal directors started blaring instructions at them in German through the loudspeaker system. There was initial confusion since nobody on board understood any German but by following the other yachts they managed to pass through without incident.

The worst weather, unfortunately, was yet to come. No sooner had they navigated through the extremely shallow water surrounding the Danish Islands than they encountered their first storm in the Baltic Sea. “We had water coming over the deck but since we wore foul-weather suits and were tied to the boat at all times, we were safe,” related Professor Davies.

By this time, most of the allotted two and a half weeks had elapsed and they still had some distance to go. After making the decision to travel the remaining miles by train and ferry, they left the sailboat in Ahus, Sweden. They relaxed for a while with some sightseeing in Stockholm. In Helsinki the crew boarded what Professor Davies depicted as “the world’s slowest train.” “We left for Leningrad at 10:00 P.M., and shunted around for several hours at the border while gun-toting Russian soldiers checked the train. We did not complete the 100-mile trip until 9:00 A.M. the next morning.”

Professor Davies was joined in Leningrad by other Cornell botanists including Professor Harlan Banks, Professor Charles Uhl, and Professor Harold Moore Jr. —all of whom arrived by “boring” jet.

At the conclusion of the conference, Professor Davies decided to forego the long sail home and instead flew back to Canada and drove to the United States.

Even Professor Davies isn’t exactly sure what exotic means of transportation he will use to go to the Xllth International Botanical Congress in five years, but few people will be surprised if he arrives in a hot air balloon.
Adams Scholarship Fund Given

Morton Adams, '33, Cornell trustee and president of Curtice-Burns Inc. of Rochester, has been honored with the establishment of a scholarship in his name. The $50,000 fund was given by the Curtice-Burns Charitable Foundation in recognition of Adams, who is retiring from the company after 13 years as president.

In January, Adams received the service award of the Forty-Niners, a representative group of the Canning and Food Processing Industry. This coveted award is given annually in recognition of individual meritorious achievement and dedication to the advancement of the industry.

Prof. Robert R. Zall, has been presented a Certificate of Appreciation by the regional office of the U.S. Environmental Protection Agency. The citation recognizes Professor Zall's contribution to a better environment: specifically for his efforts to help the dairy industry deal with its environmental pollution problems. He has designed systems to recycle food plant wastes into usable food ingredients.

Prof. Glen D. Forker has been appointed chairman of the Department of Agricultural Economics. He will succeed Bernard F. Stanton who returns to full-time teaching. research and extension work after eight years as chairman. Professor Forker specializes in price analysis, industry organization, and the regulation of competition.

Prof. Fred E. Winch, Jr., has been elected a Fellow of the Society of American Foresters. The Award is made only to those generally recognized throughout the profession for outstanding service.

Prof. Robert S. Smith, has received the Superior Performance Award from Lambda Chapter of Epsilon Sigma Pi, the honorary extension fraternity. Professor Smith was selected for his teaching and leadership in the fields of Farm Family Financial Management and Agricultural Credit.

Prof. Raymond Albrectsen, was recently honored by the New York Holstein Friesian Association, Inc. Professor Albrectsen was recognized for his contributions and achievements in the dairy industry.

Glenn Maddy '49, county agricultural extension agent in Ohio for the last 21 years was chosen to work for two years with Nepalese farmers and with the faculty at Tribhuvan University in Rampur. He is the first county extension agent picked for the program since its inception in the early 1950's. Maddy will be under contracts with the Midwest Universities Consortium for International Activities, Inc., and the U.S. State Department's Agency for International Development. Maddy will be working with farmers trying to improve agricultural production and will try to get the faculty at Tribhuvan University to teach courses to do the same thing. He says that he has "spent 21 years working with the top food producers in the world," and would like to work with people with less chance.

Former Dean Dies

The Cornell community mourns the death of William I. Myers, Dean of the New York State College of Agriculture and Life Sciences from 1943 to 1959.

Dean Myers was instrumental in developing the Federal Farm Credit Administration (FCA) during the depression. The FCA was the federal banking system geared to farmers. In 1933, Dean Myers was named deputy governor and later governor of the FCA. Dean Myers was an authority on farm management and finance and a top advisor to President Franklin D. Roosevelt.

Upon hearing of his death, Vice President Nelson Rockefeller said, "The passing of Dean Myers, my friend of many years, concludes a brilliant career of service to his fellow man. As educator, administrator and businessman, he was a man of notable achievement..."

Cornell President Dale Corson spoke of Dean Myers as "a man of personal strength, a man of ability and perseverance, a man of compassion. As a person and as an educator he made a profound contribution to Cornell, to agriculture and to the Land Grant philosophy." Dean Myers, 84, died in his home, an 84 acre farm on the east shore of Cayuga Lake, on January 30.

Co-ed Receives N. A. Farmer Degree

Janet Golub, '77, has received the National American Farmer Degree, the highest award given by the Future Farmers of America. She was nominated, also, for an office in the national association; an honor given only to those who have received the National American Farmer Degree.

The award recognizes outstanding achievement in the Future Farmers of America.
1976 Agricultural Leaders’ Forum

Theme: Critical Decisions for Agriculture in an Urban State

Coffee and registration — 10:00 - 10:30 a.m.

Program
(Begins at 10:30 a.m. and ends at 3:30 p.m.)

Introduction
David L. Call, Director of Extension, Forum General Chairman

“Agricultural Research and Education — Decisions Affecting Their Future”
W. Keith Kennedy, Dean, New York State College of Agriculture and Life Sciences, Cornell University

“Land Use Decisions — Who Will Be In Control?”
Professor Bernard F. Stanton

Lunch

“The Impact of Environmental Decisions on Agriculture”
Professor Raymond C. Loehr

General Discussion — All participants

Dates and Places:
March 22 — SUNY Agricultural and Technical College, Canton
March 23 — Fulton-Montgomery Community College, Amsterdam
March 24 — Holiday Inn, Newburgh
March 25 — Holiday Inn, Batavia
March 30 — Statler Auditorium, Cornell University, Ithaca
Freshman Picnic Class 1916.
October 19, 1912 at Beede Lab.
Cornell University, Ithaca, N. Y.

I'm glad to be, I'm glad to be,
In the class of nineteen sixteen,
Where the girls are always glad to say
We like to work and we like to play.
You ought to see, you ought to see,
Our girls of nineteen sixteen.
Cornell U. I'm going to
1-9-16 I don't know how to end it
And I'm going, yes I'm going,
To this University!

Oh! we are the Freshmen at taking our ease.
We come home to supper whenever we please,
We've had our hot dog and our marshmallow roast
This year 1916, of which we may boast!

We're here because we're here, because we're here,
Because we're here.
And if you ask us why we're here,
We're here because we're here.
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ABOUT THE COVER

This is a page from a Class of '16 member's scrapbook. She saved a marshmallow and stick from her freshman picnic. This is just one of many fascinating pieces of memorabilia in the Cornell Archives' collection.

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Within the course of our lifetimes, we are sometimes fortunate enough to cross the path of that rare individual who, despite all of life's complexities and hardships, is always capable of managing a hearty laugh. Through some special ability he can turn the mundane into the fascinating, the colorless into the radiant, and the ordinary into the incredible. Such an individual was Hugh Troy who, through his imaginative sense of humor, managed to put a precious smile upon not only the faces of his fellow Cornellians, but the world as well.

As the son of the noted Hugh Charles Troy (a dairy science professor) Hugh Troy began his mirth-filled career during his days as a student in the College of Architecture '26. During that period, he was the mastermind behind numerous pranks that rank, even by today's standards, as classics.

Of the various Cornell antics that he engaged in, many critics feel that the Bailey Hall organ incident was foremost in terms of creativity (and courage). During the 1941 reunion, in collaboration with the organist, Troy employed his genius for the purpose of rigging the organ that was to be played before a distinguished audience. Just prior to the ceremony, Troy and his cohorts made certain "adjustments" to one of the organ's pipes. As a result, various noises were emitted from the instrument during the ceremony. In the midst of his performance, the "embarrassed" organist got up and walked to the rear of the stage where he was able to locate some "workmen". The "workmen", as it turned out, were really Troy and his friends in disguise who promptly went over to the ailing organ and immediately loosened the biggest pipe. Within seconds, the pipe crashed to the floor, broke open, and out of it came various types of fowl, ranging from chickens to pigeons, as well as a used corset and an old tire. As one might expect, the audience relinquished its composure for the night.

Another Troy prank that still raises eyebrows was the famous rhinoceros incident. With just the use of a wastepaper basket and an ambitious friend, Hugh Troy had everyone believing that a real rhinoceros had fallen into Beebe Lake. Even though it was later revealed to be a hoax, many still insisted that they could taste rhino in their drinking water!

Even professors were not immune to the ever-mischiefous nature of Hugh Troy. One story has it that he stole a professor's rain rubbers and proceeded to paint the image of feet on them. He then camouflaged the image with lampblack and waited for the results. Sometime later, the professor had the occasion to wear the rubbers on a rainy day. As was anticipated, the lampblack was washed away by the rain and the poor man was seen to be walking around in his "bare feet".

But college proved to be only a training ground for Troy who, for many years, incorporated his sense of humor into his various endeavors.

During his army days, when he had a desk job on a Pacific Island, Hugh Troy found yet another opportunity to unleash his tricks upon an unsuspecting community.

As an officer who was continuously deluged with paperwork, Troy thought up a way to relieve some of the monotony of his job. The story begins with the observation of a piece of flypaper that he saw in a mess hall. From this site, Troy was inspired to make official reports of the number of flies caught each day. Subsequently, these reports made their way through the upper echelon of the military, without any question. As a result, other units were required to file these reports. Eventually, as Troy relates, the submitting of Daily Flypaper Reports became a military standard.

However, the most daring of Troy's capers were to take place during his civilian life. Of particular interest is the time he purchased a park bench. He would set it down in Central Park and wait for a passing policeman to arrive. When the right time came, he would lift up the bench and run away with it. After being arrested, he would show the bewildered officers his receipt and quietly walk away.

But if one were to select Hugh Troy's most outstanding prank, he would almost certainly have to consider the Fifth Avenue incident while making his choice.

During this episode, Troy and his gang, complete with construction gear, spent an entire day digging up a hole in New York City's prestigious Fifth Avenue. Although thousands passed by the site, it took city authorities a considerable amount of time to even realize that the hole had been dug!

Hugh Troy passed away in 1964. But his memory will endure in the countless smiles he has brought upon the faces of not only his generation, but future generations as well. And, to an accomplished practical joker, this is the greatest of all tributes!
Many scrapbooks had ornate covers; inside this one were exam papers.

My parents told me not to smoke,
I don’t
Or listen to a naughty joke;
I don’t.
They made it clear I must not wink
At handsome men, or ever think
About exhilarating drink,
I don’t.
To dance or flirt is very wrong,
I don’t.
Wild girls chase men and wine and song
I don’t;
I don’t;
I kiss no fellows – not a one –
I do not know how it is done.
You wouldn’t think I have much fun,
I don’t.

— Mulberry

This clipping was found in Gertrude Mathewson, Class of 1923’s scrapbook which is 12 inches thick. The Department of Manuscripts and University Archives in Olin Library has roughly 100 scrapbooks kept by Cornell students between 1869 and 1928.

These scrapbooks (sometimes called stunt books) contain pressed flowers, pictures of trolley cars, a garter, and even a lock of Davy Hoy’s red hair (of “Give My Regards to Davy” fame). One woman saved a marshmallow on a charred stick from the Freshman Class of 1916 picnic at Beebe Lake. Napkins, handpainted menus and a tobacco pouch with matches from a 1906 Junior Smoker are among the memorabilia. Also, a scrap of paper carried by a pigeon announcing the winning of the 1897 boat race by Cornell.

Henry R. Ickelheimer, Class of 1888, saved examination papers. He later became a trustee of Cornell University. Other students’ records contain notes from lectures given by Andrew D. White, Cornell President and Professor of History, and Burt G. Wilder, Professor of Comparative Anatomy and Zoology.

“The scrapbooks are important because they contain records of a student’s daily life that were not recorded by the University,” said Patricia Haines, a graduate student studying history and education at the University of Pennsylvania. Mrs. Haines has been searching through these scrapbooks for information about the first women who attended Cornell.

She found that women had more photographs in their scrapbooks than men. “On a lovely day, girls would go downtown and have their pictures taken together,” she said. Her research has also led her to the conclusion that there wasn’t a stigma attached to two people of the same sex touching each other. For example, at fraternity parties boys danced with boys, and girls danced with girls.

In December 1875, this anecdote appeared in one Cornell publication, “A sophomore recently attended a lecture in the village, during which the speaker had occasion to repeat the word mankind until it grew somewhat monotonous. Turning impatiently to the fair one, at his side, he asked: ‘Why does he not say something about womankind?’

‘Her eyes filled with wonder as she replied: ‘Do you not know that mankind embraces women?’

“He says he didn’t, but pledged himself to bear it in mind.’ This awareness in 1875 sounds contemporary.

Students also attended recitals, plays, and other cultural events. They saved programs of the plays at the Lyceum Theatre. It was located downtown and its entrance was on S. Cayuga Street. They also belonged to Glee Clubs. Since there was no radio, students had to
Cornell students also saved the dance programs which listed their dance partners for the waltz, two-step, etc. The dance books (or dance cards) had elaborate soft leather covers and a tiny pencil attached so people could keep track of their next dance partner.

The University Library had “Special Rules.” Rule number one was, “no person except members of the faculty and the Librarians is allowed to remove books from the shelves.” Rule number two said that “the utmost order must be maintained in Reading Rooms. All conversation, wearing of hats, and lounging upon the tables are strictly prohibited.” The Assistant Librarians had orders to stringently enforce those rules.

After 11 a.m. on Spring Day, Cornell students had a parade and picnic. In the evening, students went down to the Lyceum Theatre to watch a play.

In the “Without Ceremony” booklet for freshmen, a new student could learn about acceptable behavior at Cornell. These particular rules were adopted by the Vigilance Committee on January 7, 1906. The rules were revised by the Senior General Committee on June 2, 1912. First the booklet defines a freshmen as a “first year student in any college.” Secondly, “no Freshman shall smoke at all on campus nor shall he smoke a pipe on the streets of Ithaca.”

Also, “no Freshman shall be allowed downstairs at Zinck’s and The Senate under any circumstances, nor upstairs unless accompanied by an upper classman.” The next rule states that every Freshman must at all times, except on Sundays, wear a grey cap with a small visor and a black button.” Nor shall a freshman sit in the first three rows of the Lyceum Theatre or in the covered stand at Percy Field. In addition, “no Freshman shall occupy a seat in a trolley car when by so doing taking the seat from an upper classman.” Finally, the last rule, and probably the only rule still applicable to all Cornell students at the present time; “painting or otherwise defacing the buildings or equipment of the University is forbidden.”

In another guide, called “The Freshman’s ABC’s”, beer was defined as something you “pretend you have seen before, and know you can get more of later.”

Other things in students’ scrapbooks included early copies of the Widow, the Era, and the Cornell Daily Sun. Also a ribbon that held a bottle of champagne at the christening and launching of U.S. Battleship New Jersey. Someone else saved a laundry ticket and the face of his college wrist watch. Girls saved pieces of cloth from their prom dresses while track members saved the numbers from their shirts.

In 1910-1911, a season ticket for minor sports cost $3.00 while the same ticket cost $5.00 in 1914-1915. The students also held a “funeral” for Al G. Bray, the second son of Matthew Matcis. Somehow, someone managed to get a piece of the coffin and it was glued into a person’s scrapbook.

“We are always glad to take scrapbooks because they are such a point of interest of other days,” said Barbara Shepherd, library assistant at Olin Library. The archives acquire many of the scrapbooks through wills, from the relatives of alumni, and when alumni move into apartments, they find that their space is limited; people feel that their scrapbooks are safe at Cornell.

If anyone has a scrapbook that they would like to donate, they can send it to the archives: Gould Colman said, “I don’t think students keep scrapbooks anymore,” but he encouraged students to keep one, since it is such an interesting and rich source for finding out about the history of Cornell.
“I stopped feeling fulfilled as a person, so I left to be where I could be of more use.”

“My being here just lacked meaning and I lost my motivation to study.”

“At this stage of my life, I felt my time could be spent more beneficially out of the classroom.”

These three quotes are from people who all took time off from Cornell at some point during their four years as undergraduates. What makes these quotes unusual is the fact that the first two are Cornell alumni who made the statements 30 years ago, while the third is from a current student, (class of ’76).

Taking time off from school is nothing new to the college scene. Thirty years ago just as many students were leaving, only these people had to drop out and then reapply to continue their studies. During World War II there were few males who graduated with their class, losing two or three years to the service. Yet today the idea of not finishing school is suspect. Dr. Donald C. Burgett, Registrar for the College of Agriculture and Life Sciences, stated that ten years ago the prevailing attitude was that if you took a leave, you wouldn’t come back. However, Dr. Burgett estimated that eighty percent of those who leave do return. Another study, by Jeanne Danielski for the Arts college, showed that of those who did not return, many continued their formal education elsewhere. (Sixteen of twenty-three students in this category are in school or have completed their undergraduate work).

The number of students taking leaves from the Ag college has more than doubled in the last five years. In 1970-71 there were as few as fifteen students on leave, while this year the number has increased to between thirty and forty students per semester. One of the contributing factors and possibly the major reason for this increase was the government’s ending of the mandatory conscription of males into the service. With the stopping of the draft, the pressure of staying in order to maintain draft exempt status is removed. If you now want to take a leave there is no fear of being sent to war as the possible consequence for this decision.

A second possible cause for the increase of students taking leaves was the termination, five years ago, of Agriculture and Life Sciences’ college program of mandatory work experience in order to complete the credits necessary for an undergraduate degree. Dr. Burgett named the desire to get work experience as one of the three most prevalent reasons students take leaves.

“I had been in school all my life and had no idea what it was like in the real world or how academic studies related to it, if at all. I needed to find that out before I could continue in school.”

During the time away from school spent working, a number of students discovered that they really didn’t want to spend their lives in the field they originally chose. Others really got involved with their jobs, and upon returning found classroom academics to be a much more real experience.

There is nothing sacred about finishing college in four years, just as there is nothing sacred about going to college right after high school. Our system of education became geared towards getting people out into the world equipped with as good an education as possible in sixteen years or less. The press to finish one’s education increased
as a result of the science boom, which started with Russia beating the U.S. into space with Sputnik, and our subsequent efforts to regain technical supremacy. There is the reality that our universities produce scholars who aren't prepared for the work world and spend their first year on the job learning how to survive. A possible solution to this problem is being experimented with at Dartmouth, where a mandatory year off from school is being tried.

According to Elmer Meyer, Dean of Students for Cornell University, Cornell is atypical of the current national trend in that the press here is to finish in four years. This attitude does differ from other universities within the state and the Big Ten universities for example. However, in spite of this pressure to finish, the University encourages students who are confused or having trouble to take time off to get themselves together.

The University recognizes a myriad of reasons for taking leave as being valid. One student stated as his reason: "I just wasn't ready for college. I wasn't ready to compete, and I didn't know how to cope with aggressive students from big cities."

The Cornell Arts College Study revealed that 22 percent of those who took leaves expressed unhappiness with their personal functioning in the college situation. The

What Did Ezra Know That You Don't?

by Donna Rollo '76

Do you think you have a good understanding of Cornell's history?
Take this short answer, true and false quiz and find out.

1. Willard State Hospital, if Willard had named it would have been called "The Beck Asylum for the Chronic Insane." T. F.

2. Cornell University was originally a Quaker Institution, mainly because its founder Ezra Cornell was Quaker and felt that more institutions representing his religion should be established. T. F.

3. Ezra Cornell could be viewed as a man with aesthetic qualities. T. F.

4. In the spring of 1844, Ezra Cornell built the overhead telegraph line from Washington to Baltimore. On May 24, 1844, Morse tapped out the historic message, "What hath God wrought." This was the beginning of a long involved friendship and working relationship between Cornell and Morse. T. F.

5. Cascadilla Place, Cornell's first dormitory was originally planned as a water cure or sanitarium. T. F.

6. What is the nickname of the Eddy Street gate, a gift from President White?

7. Under the directorship of what Cornell President was Cornell's Medical College in New York City established?

8. The "Bullfight of 1905" involved the killing of the last of Ezra Cornell's famed bulls. T. F.

9. Pearl S. Buck graduated from Cornell. T. F.

10. Deane W. Malott, the sixth President of Cornell, was President of what college previous to becoming President of Cornell?

11. What native Ithacan, who was a porter for the Lehigh Valley R.R. in the 1940's, was Willard Straight's personal butler during the early years of Cornell's history?

12. Who was George Hamilton?

13. Name the Cornell music student who wrote the popular operetta 'Co-ediquette'. His first attempt, 'In the Red' was also a success.

14. The comic strip 'Henry,” “Hap Hopper,” “Blondie,” and "Lil' Abner", were all introduced to the Cornell Daily Sun in the same year. What was that year?

15. Katherine Hepburn was in Ithaca once. What was the occasion?

Turn to page 11 for answers.
Commencement was held on Libe Slope in June, 1920.

A Moving Affair
by Randy Heller '76

Make grades, not war.

Commencement '76 is again slated for Schoellkopf Field.

Women had joined the ranks in large numbers by 1888.

They can always squeeze.
It's almost that time of year again. On May 28, Cornell University will conduct its 108th annual commencement when over 3,200 degrees will be awarded.

Ezra Cornell himself mailed the invitations to the first Cornell commencement. On that sunny Thursday morning, July 1, 1869, the eight graduating students along with the band, students, faculty, trustees and guests marched from Clinton House to Library Hall (later the Cornell Public Library) on North Tioga Street in downtown Ithaca. There, amidst a huge crowd, each of the graduates received his diploma and gave a commencement address. The ceremonies concluded with an address by President White whereupon everyone repaired to Cascadilla Place for the President’s reception.

As the size of graduating classes grew, it became necessary to move the commencement exercises to larger and larger arenas. Among the places which have played host to graduation over the years are the old Armory, Sage Chapel, Libe Slope, Bailey Hall, the Arts Quad, Barton Hall and, most recently, Schoellkopf Field.

Commencement, although rich in ceremony and tradition, has not been without its share of surprises. In June 1970, a rather symbolic altercation highlighted the commencement exercises. As anti-war activist C. David Burak, ’67 attempted to storm the stage and take control of the microphone, Professor Emeritus Morris Bishop took the 14-pound silver and gold university mace from his right shoulder and delivered a blow at the young man’s side. “The mace was originally a weapon of offense in the Middle Ages,” related Bishop, Cornell’s 77-year old historian. “So, I saw no reason why I shouldn't use it for the same purpose.”

For the second straight year, Cornell will hope for sunshine in an attempt to accommodate over 10,000 guests outdoors in Schoellkopf Field. President Dale R. Corson, occupying the same chair used by Ezra Cornell at the exercises which celebrated the opening of Cornell University on October 7, 1868, will deliver the commencement address.
Sororities:

You’ve Come A Long Way...  
by Joanne Dalton ’76

To encourage and preserve inter-fraternal spirit and “to limit the evils of rushing,” were the principles behind the 1912 Pan-Hellenic contract. The 15 point contract was signed by the university’s six sororities and established guidelines for social interaction.

Fraternity girls were allowed to dance in the gymnasium “with entering girls every night except prayer meeting night, until 7:45.” No fraternity girl could dance twice in the same evening with an entering girl. The three days preceding pledge day were days of social “non-intercourse.”

These rules were written in an era of dance and calling cards, when trolley cars rolled through Ithaca and freshman girls needed a chaperone to go anywhere in the evening. Sorority members, in the early 1900’s, lived in Sage Hall and had ten o’clock curfews.

Sororities today impose few, if any, restrictions on their members. They are no longer homogeneous groups. Membership reflects a broad range of interests, backgrounds, and perspectives.

The sixties were a transition period for sororities. Off campus housing became an option for upperclasswomen. Women no longer sought sororities as an escape from dorms. One Cornellian remembers this time as a period of dissent: “It was a time when the desire for innovation sometimes necessitated a rejection of tradition.”

Another graduate of the sixties found that, “Greek life conflicted with my priorities, it just didn’t seem important at the time.”

The decline of sororities in the sixties was a combination of several factors, according to Ms. Ruth Darling, associate dean of students.

North campus dorms changed the dominance of Greeks on campus, present in the fifties. Many girls in that epoch assumed that their social life was dependent on membership in a sorority.

The sixties encouraged the alleviation of social pressures. “People came to see sororities and fraternities as another option and were able to make freer decisions,” Ms. Darling said.

The number of sororities at Cornell decreased during that decade. Several left Cornell because of membership problems. A few left because of conflicting policies between the local and national chapters.

The 1967 Saperston commission, a trustee report which stipulated that fraternity and sorority living units had until 1969-1970 to conform to its discrimination clauses, was the impetus for much of the change.

Sororities today impose few, if any, restrictions on their members. They are no longer homogeneous groups. Membership reflects a broad range of interests, backgrounds, and perspectives.

The commission prohibited the reference requirement which existed in several houses. The purpose of abolishing this procedure was to return control of membership selection to active members. Any discriminatory statements in chapter rituals and ceremonies was also forbidden.

Finally, the practice of blackballing was banned. This “one-ding” method required all candidates to be accepted by an unanimous vote.

During this period, several Cornell chapters had disagreements with their national organizations. In some cases, according to Ms. Darling, these differences caused separation from the nationals.

In the seventies, sororities have enjoyed renewed
This year 480 girls, (and a few males with feminine names and possible misgivings) signed up for sorority rush. After the three week rush period, 222 bids were extended. Letters of regret were sent to the 61 girls so were not accepted at any house.

Connie Murray, assistant dean of students, admitted the possibility of establishing a new sorority at Cornell. We are having a workshop in March to re-evaluate the whole rush system. Since we sent out so many regrets perhaps the answer is another house on campus.

Kappa Delta has recently returned to the Cornell campus. With the addition of this year’s rush class, there are 52 members of Kappa Delta, according to Charlene Ellen, ’78. “Things have worked well for us,” said Ms. Ellen. Kathy Chanda, ’79, a Kappa Delta pledge, was attracted by Kappa Delta’s diversity. “I was turned off by stereotyped sororities and really wanted a different lifestyle.” Alice Williams, a Kappa Delta alumna, expresses her happiness in Kappa Delta’s return. “That is the nucleus of a really strong chapter,” Ms. Williams said.

There are now eight sororities at Cornell: Alpha Phi, Delta Delta Delta, Delta Gamma, Delta Phi Epsilon, Kappa Delta, Kappa Psi, Pi Beta Phi, and Sigma Delta Tau.

Attitudes towards sororities vary with the individual. Gaye Wood, ’77, finds sorority life worthwhile because it allows for small group interaction. She concedes, however, that “it tends to exclude certain people and limits your social sphere.”

Paige Ireland, ’76, enjoys the fact that “there’s always something going on,” but suggests that “if you succumb to extreme peer group pressure, there might be problems.”

Sororities have endured many transitions during their near century at Cornell. They no longer are just a housing option; nor are they a social requisite. Yet sororities are in greater demand than ever and would seem to be a part of Cornell life in the future.

This year 480 girls and a few males with feminine names and possible misgivings signed up for rush.

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**Here’s What Ezra Knew**

*by Donna Rollo ’76*

1. True. For many years Dr. Willard (of Cornell) and before him Dr. Beck, had been deeply interested in the treatment of insane persons in the state. Dr. Willard had appeared before the state legislature in favor of a bill to create an adequate institution to be called “The Beck Asylum for the Chronic Insane.”

2. False. The University almost instantly gained fame for its frank and publicly announced departure from conventional academic and religious ideas. Cornell was referred to in 1868 as “The Cornell Idea” an institution in which any person could find instruction in any subject, and in which professors would be appointed and students welcomed whatever religion they may profess, or even if they professed no religion at all.

3. False. A.D. White was in constant terror lest Cornell should make of his University “a great starving workshop.” White’s adjutant, W.C. Russell wrote him: “I dread Mr. Cornell’s wall paper (for McGraw Hall) more than you do, I expect horrors in every figure.” “The aesthetic was quite left out of him,” replied White.

4. False. Morse and Cornell were instinctively hostile. Morse, who was not in fact a very competent mechanic, resented Cornell’s proposals for improvements and no doubt the tactlessness with which they were presented.

5. True.

6. “Andy’s Chocolate Cake.”

7. President Jacob Gould Schurman 1890-1920.

8. False. What was really a harmless burlesque, with an improvised paper mache “bull” brought upon the University unfavorable comment from all parts of the country.


10. University of Kansas, Lawrence, Kansas.

11. Alonzo J. Brown.

12. Professor Emeritus of Romance Languages, also a curator of the famed Dante and Petrarch collections.


14. 1940.

15. Katherine Hepburn appeared in “The Philadelphia Story,” which had a single showing at the Strand Theatre in 1940. While in Ithaca she sold autographs to aid the campaign of FDR.
After several Cornell semesters some students long to make the great escape. Tired of the same curriculum, bored with Cornell’s frantic academic pressures, they seek a new kind of learning experience. Some have found it in field study.

Field study is a Cornell semester away from Ithaca and the academic routine. Offered during Spring semester by the College of Human Ecology. ID 408 is a fifteen credit course which requires participants to assume dual roles of student and worker.

Students work in business and service organizations, located in the New York City metropolitan area. Throughout Spring semester, the field study student attends weekly seminars and works on the job three and a half to four days a week. The course provides a channel through which students can mesh practice and theory to see how each applies to the other. Instead of remembering concepts for an exam, students get a chance to try them out.

Janice Bigler, a senior in the College of Agriculture and Life Sciences, was considering taking a semester off when she saw the field study notice. The Field Study Office accepted her into the program and placed her with the Bureau of Food and Beverage control of the Environmental Health Division of Nassau County Department of Health.

She accompanied sanitarians on restaurant health inspections, learning about different types of violations and how to handle them. She also participated in the educational program for food handlers. Now that she is back in Ithaca, she says, “I definitely think that field study is a worthwhile thing. It lets you take the things you’ve learned in class and apply them to see how they really work.”

Living in a metropolitan area offers students opportunities to work where their interests lie and to try out certain careers. Becky Arnold, ’76, is taking field study this semester. She works at a diagnostic center for multi-handicapped children. “I’m sitting in on everything I can,” she says, from working with classroom teachers in the children’s psychiatric unit to contacting parents about their child’s future rehabilitation. This experience is helping to direct her career plans. “I love working where I am . . . I think it will help me to finally decide what field I want to go into working with children.”

Other students have expanded their interests after field study experiences. Reina Shakin, ’76, entered the program in Spring, 1975. She worked with the Nassau Community Care Center in Inwood, New York, organizing and evaluating a Teen Health Program for a lower-income, black community on Long Island. Before field study she was planning to teach health, but “I was a little dissatisfied with teaching,” she said. “I realize now that I’m going to go into public health and more community health teaching. My area was broadened.”

Dr. Kathe Evans, Director of the Field Study Program, said that most students enrolled in field study are juniors; a few are sophomores and seniors. They have some background for the work they will do, but most will have time to modify their curriculum when they return to Ithaca.

After 14 weeks with the Bureau of Food and Beverage Control, Janice Bigler says, “I decided that I am definitely interested in health and community work, and I gear my courses now toward that.” Her educational perspective has also changed. “Once you come back you realize how to deal with your education. Sometimes I’ll get a theory, and I can apply it back to what I’ve already done and use that as an example.”

Time away from Ithaca’s Cornell can put education back into the student’s hands. Alice Grossman, ’77, worked with brain damaged children and a movement therapist during her field study semester last year. She says, “Students have a lot more control. I didn’t realize how much control we have over our education until I got back to regular school.” She explained, “Usually, a semester drags on. You get bored with a few of your courses. But when you’re on field study, if you get bored, it’s up to you to change it. You really direct what you want to do.”

Besides working three and a half days a week, students keep daily journals of their work experiences and attend weekly seminars. Students work in task forces, studying the ways and effectiveness of organizations which deliver human goods and services and assessing the impact of
high-level business policymaking on its consumers.

Director Kathe Evans says that field study demands a lot from students, but the pace is different from a regular Cornell semester. After work, students usually have time to reflect on what they have seen or done and record these impressions in their journals. She also thinks that the seminar's group efforts, although timeconsuming, can be richer experiences than individual projects. "The seminar really brought things into focus," explains Reina Shakin, and Janice Bigler says, "Because the group was so small there wasn't any type of academic pressure. We all kind of worked together as a group."

Naturally, field study has some drawbacks. One is being away from one's friends in Ithaca for a semester. Becky Arnold, now in New York City, says, "There's times I wish I was closer to Cornell so I could use the libraries and see the people I'm familiar with there. But at the same time it's good to be far away."

Being far away gives field study students a different perspective on their education and a close-up view of career fields. Some students achieve this vantage point by temporarily dropping out of school; others stay close to the books, gathering credits every semester for four years. Field study students opt for the best of both worlds.

Dr. Ethel Kahn, Field Mentor, meeting with students to discuss their projects.

Nollie Wood practices his interviewing technique for field studies on local businessman Bill Norton.

An ID 407 student doing warranty research at the Conference Board.
A Semester In New York
by Joyce Friedlander '76

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Hooks, Books, and Ladders
by Michael Brown '76

“What do you want to be when you grow up, Billy?”
“Oh, Daddy, I want to be ... at the first hint of an alarm. Heck. bunking wasn’t as glamorous as I had imagined, but it was a lot more practical.

The answer to that question is not surprising. Every kid on the block wanted to be a fireman at one time or another. There was something glamorous about the life-style—rushing off in the middle of the night to do battle with an out-of-control blaze on the other side of town. It was the 20th Century’s answer to knighthood and every boy’s dream.

I visited the new Firehouse No. 9 (next to the bar of the same name) the other night hoping to recapture my lost childhood dream in conversations with the “bunkers”. For those readers not familiar with this term, the bunkers are students who double as firemen. In exchange for fire fighting services they receive a place to live complete with bed, study area, recreational facilities, and kitchen privileges. My romantic visions were deflated when I discovered that the reasons for becoming a bunker are chiefly economic. But these guys are serious young men and bunking helps them ease the high costs of a Cornell education.

Lieutenant Albert Williams of Station No. 5 explained the process one has to go through to become a bunker:

“We get a lot of applications, and consequently we have to turn some of the boys down. Economic need is the chief criterion in our decision. The young men we accept are usually the ones who need a little help paying their college expenses.”

The bunkers who take up residence in the fall are obliged to attend training sessions until May. These consist of both classroom work—becoming familiar with terminology and equipment—and actual fire fighting techniques. Most of the instruction takes place at the training center on Route 15.

Jim Kafura, a sophomore in the College of Agriculture and Life Sciences, became familiar with bunking a few years ago. A friend in Jim’s home town recommended it as a viable living arrangement. He has been bunking at Firehouse No. 9 since December but hasn’t had any fire fighting experience to date — just a few false alarms. With a few exceptions Jim feels that his lifestyle is not too far removed from that of the typical Cornell student:

“The biggest difference is the occasional late night alarm, but that is part of the deal. You learn to accept it. As far as restrictions go, we are asked not to tie up the phones for an unreasonable length of time. We have quite a bit of freedom here.”

John Nichols, a native Ithacan and a junior in the College of Arts and Sciences, has been a bunker for a year and a half. Feeling he couldn’t afford the expense of an apartment, he joined the bunkers at No. 9.

“I enjoy it,” John explained. “At the start there was a little conflict with the drivers. They considered me a kid who didn’t know the first thing about living and working in a firehouse, which was pretty close to the truth. After I’d been here awhile, though, we got along very well. We still do.”

“What about the possibility of a fire on the night before an exam?”

“That’s really not a problem. I just sleep at home for a few nights before a test. Being from Ithaca helps in a situation like that. We aren’t required to spend every night in the firehouse and it’s not unusual to take off for a week or two.”

Mike Schram is a freshman in the College of Agriculture and Life Sciences and a hockey player for the Cornell junior varsity. He has been bunking at No. 9 since September.

“Coach Bertrand takes care of the players’ living arrangements and I just happened to end up at No. 9. I certainly don’t have any complaints. Last fall it seemed like we were answering alarms every night, but this semester things have been a little quieter.”

I thanked the bunkers for the time they spent with me and walked toward the exit. The trucks were parked splendidly in the garage, ready to roll at the first hint of an alarm. Heck, bunking wasn’t as glamorous as I had imagined, but it was a lot more practical.
Alumni Association Membership Drive

John Sullivan, '62 President of the College of Agriculture and Life Sciences Alumni Association, along with the Board of Directors will initiate an active campaign to increase the membership of the Association in early March. They wish to increase the membership by 1000. They hope to reach their goal by June 1976 with the assistance of the present members and a direct mail campaign to the graduates of the College who are not presently members of the Association.

Professor Tukey Elected President

Harold B. Tukey, Jr., Professor of Ornamental Horticulture, has been elected president of the International Plant Propagators Society for 1976. Professor Tukey is the first Cornellian to head the 1500-member organization since its establishment in 1950. Professor Tukey is an authority on the leaching of nutrients from plants by the action of rain and mist. His work has resulted in new concepts of the action of rain on plant growth as well as technical developments useful to horticulturalists. Through research, Professor Tukey found that water mist is effective in eliminating radioactive fallout elements from food plants contaminated from radiation. He is a member of the executive committee of the American Horticultural Society, and is serving a second three-year term on the Society's Board of Directors. He is also a member of the American Society for Horticultural Science, the Botanical Society of America, and the International Society for Horticultural Science.

Max Brunk, Professor of Marketing at the College of Agriculture and Life Sciences acted as independent chairman of three plenary sessions of the World Beef Producers who gathered in Bermuda to seek more stability in the international beef market. Some 50 delegates from 15 cattle-producing countries were invited to the meeting by the Australian Meat Board. Professor Brunk, a world-authority on marketing, has appeared as a speaker on marketing and trade before numerous livestock producers in the United States, Australia, New Zealand, and Ireland.

Laing E. Kennedy, '65 Assistant to the Dean for Development and Alumni Affairs in the College of Agriculture and Life Sciences, moved to Day Hall in November, 1975. He is now Director of Cornell's Regional Offices. Bradford Carruth, who most recently served as Assistant Director of Admissions of the College is now coordinating the efforts of the Agriculture and Life Sciences Fund and working with the Alumni Association of the College. Carruth was elected to serve out Kennedy's term as secretary of the Alumni Association at the January 17th meeting of the Alumni Association Board of Directors.

Glenn F. Litchfield '65 has opened an office for the general practice of law in Rochester, New York. As a graduate of the College with a BS in agricultural economics and of Syracuse University College of Law, Litchfield specializes in agricultural business and estate planning and practice. He was formerly an associate attorney with the Rochester law firm of Woods, Oviatt, Gilman, Sturman, and Clark.

Pathology Professor Retires

Robert M. Gilmer, Professor of Plant Pathology and a former Head of that department at Cornell University's New York State Experiment Station retired recently. He joined the station faculty as an Assistant Professor in 1950, was promoted to Associate Professor in 1954, and to Professor in 1959. He served as Head of that department from 1967-1972. He spent two years on an international agriculture assignment at the University of Ibadan, Nigeria following that position. During his time at the station, Professor Gilmer developed an international reputation for his research on viral diseases of fruit trees and grapevines. He contributed invaluable understanding of the causes, origins, and reasons for several viral and mycoplasm diseases. He also conducted studies on the transmission of the disease causing agents. These studies resulted in about 60 journal papers and numerous popular articles. Professor Gilmer assisted regulatory agencies, nurseries, and growers in implementing practical programs resulting from his research findings.

G. Michael Hostage (MBA) '54 has been endorsed by the Committee on Alumni Trustee Nominations for the 1976 trustee elections. Hostage joined the Proctor and Gamble Company after graduating from Cornell with a BS in agricultural economics and a MBA. He now serves as President of Restaurant Operations for the Marriott Corporation in Bethesda, Maryland. Helen M. Berg '51, Richard J. Bradley '63, and Aryeh Neier '58 were also endorsed by the Committee.

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KEEP A PIECE
OF THE COLLEGE

AT HOME

ALUMNI ARE NEEDED
TO:

- assist with recruitment of well-qualified students
- increase contact with administration and staff of the College
- advise students and alumni of career possibilities

CONTACT:
ALUMNI ASSOCIATION

The New York State College of Agriculture and Life Sciences
205 Roberts Hall, Cornell University
Ithaca, New York 14853
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ON THE COVER

Tom Bush, Director of Crossfire Ithaca, a television game show run by students in communication arts in the New York State College of Agriculture and Life Sciences, works in the control room of a television studio. The game show is an attempt by the College to give students a chance for work experience in a way that benefits the community.

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Tuning into the TV Game

by ANN VOORHEES '76

"Thirty seconds. Stand by," called the headphonefitted floor manager standing in the middle of the room. The people working the cameras moved into position while the host straightened his tie and the panelists shifted in their seats. Up in the control room the director fired instructions to the technical director and video person. The off-stage voice counted backwards from ten to three into the microphone. Everyone held their breath and waited for the sign that the tape was rolling and recording had started. When it came, three stop watches clicked on, music welled from the walls, and a voice intoned, "Good evening and welcome to Crossfire." Is this taking place in a major network studio? No, this is happening right here at the taping of Crossfire Ithaca, the only local television game show.

Crossfire Ithaca is a product of one of the two media laboratory options open to Communication Arts majors in the N.Y. State College of Agriculture and Life Sciences. In the beginning of last semester, members of the broadcast media laboratory decided to write and produce a television game show for their course. Crossfire has come a long way from there. In just one semester, the format, advertising, and participation in Crossfire has changed remarkably. The students involved this semester have strived to make Crossfire a viable program selection for greater Ithaca.

The working knowledge gained includes experience with sales, running a camera, and everything in-between. A look at the credits displayed at the end of a show will give you an idea of what this includes. Since students run Crossfire, they must run all aspects of media production. A few general categories are promotion, set design, and production.

Promotional work for spring semester's Crossfire started before school let out for winter break in December. Students designed and wrote an advertising brochure so that they could contact prospective advertisers before the season started. Posters announcing the weekly teams and sponsors were also designed.

With the start of spring semester, promotional work went ahead at full speed. Students interested in sales contacted advertisers and searched for sponsors with promotional prizes. Others wrote press releases and hounded newspapers for coverage. All of these jobs continued throughout the semester, giving different students a chance to try their hands at selling.

Set design also started before the beginning of the season. The backdrop, arrangement, and title cards were all revamped for a fresh look. Set design includes a lot of visual elements which someone unfamiliar with production fails to consider. The team name placards had to be done weekly, and the credits painstakingly written letter by letter.

Production and taping of the show took place in the Educational Television Center in Martha Van Rensselaer Hall. Students learned camera work, the principles of lighting, and other production techniques. Since the taping was run according to a tight schedule, the production crew learned the necessity of having things done on time and with split-second spacing. Even the students with little former production experience took part as runners and timers. The host of the show and the off-stage voice were also students, and the questions used were student-written.

The part of Crossfire that was familiar to viewers was the actual game show itself. Arranging this may well have been the most challenging part of all. A student acted as contestant coordinator, and contacted groups for the show. Crossfire tried to pit opposing groups against each other such as the Girl Scouts vs the Boy Scouts. Out of the twenty groups from Ithaca area schools, only a few could participate due to time limitations. A few students from more than one group were thus able to participate against each other.

The students involved in Crossfire have a firm idea of what they are doing. As they look at the future of television, students are able to draw a logical line between what they practiced on a small scale and the highly sophisticated television production they may one day see on the big screen. How much they learned, they could see in the beginning of the first show they taped. On the first show, the voice of the floor director declared, "Thirty seconds. Stand by," then followed by the director firing instructions in a rather daunting manner. But just as we were beginning the season, a sort of teamwork was established. The director fired instructions smoothly, and the voice of the floor manager was heard as a part of the show's theme rather than as a part of the commentary as in the beginning.
Senior citizens Lydia Darling, Helen Vandervort, and Eunice Johnson (front left) battle against George Kriger (right) and unseen teammates on a Crossfire show hosted by Buck Briggs.

Boy Scouts, and local Democrats vs Republicans. One of the selling points of Crossfire for advertisers was its ability to tailor the audience to the product advertised. If a sponsor wanted to reach young people, he could advertise on a show featuring fraternities or local youth. The questions were also tailored to each specific group for fairness and interest. The aim was not to cause conflict, but to provide enjoyment and involvement for both participants and viewers.

The second main purpose of Crossfire was to benefit the community. Craig Wander, senior in Communication Arts and creator of Crossfire, stated the motive to be "to bring television down from the pedestal of network control and put it where it belongs, in the hands of the common person." The students tried to give every faction of the viewing audience a chance to appear on the show. Crossfire was shown on WCIC cable channel 13 so was available to everyone who wished to participate. Wander called cable television "the medium we selected to present Ithaca to itself."

Crossfire Ithaca is truly a television show by the students, for the people.

Sitting and waiting is a big part of television production, as shown by Ann Voorhees prepared to push the seven second buzzer.
Most students in the College of Agriculture and Life Sciences tend to forget the contributions the College makes to the public. We are generally ignorant of the valuable research and resultant benefits that originate here. But Cornell has been the site of many breakthroughs in agricultural technique and production.

Cornell's most recent contribution is a new corn hybrid—Cornell 103. This new variety ripens about a week earlier than its predecessors, Cornell 101 and Cornell 110, and is expected to increase corn production in the short growing season areas of New York State. It also allows farmers in longer growing season areas to plan more flexible planting and harvesting schedules. They will now have the option of early planting followed by early harvesting, or a later planting/harvesting schedule.

Cornell 103 is the result of research carried out by Prof. Clarence Grogan and his research associate, Clifford Manchester, both of the Department of Plant Breeding and Biometry. It is a cross between Cornell 101 and the male parent of Cornell 110. This crossbreed is revolutionary because it will allow corn production in areas where it was once impossible. Besides being suited for the short-season regions in New York, Cornell 103 will be used in high elevation areas in other parts of the state where cool weather has traditionally deterred corn production.

Other researchers in Plant Breeding and Biometry have developed a new strain of kidney bean named Redkloyd. According to Dr. D. H. Wallace, this development is another successful step on the road to a maximally efficient strain of kidney bean.

Before 1966 farmers in New York State were dependent on the arid, western United States for kidney bean seed. Halo blight, a disease that thrives in cooler areas, hindered seed production in New York. To combat this problem Cornell researchers in 1966 developed a strain of bean they dubbed Redkloyd. Redkloyd was 20 years in the offing and did indeed have strong resistance to halo blight. Much of that 20 years was spent trying to produce a bean that people would accept. People want their kidney beans to look like kidney beans. Developing a dark red, kidney-shaped bean proved to be a long, arduous task.

Redkloyd was a great advancement for bean production in New York, but it certainly did not signal the end of research in this area. In 1974 Cornell came out with a greatly advanced strain called Redkloyd. Its advantages include an earlier and more uniform maturity and a greater percentage of dry seed weight. Redkloyd's resistance to blight is excellent and its yield is about equal to Redkloyd's.

The next attempt in kidney bean research will focus on a strain that can produce a higher yield while maintaining all the positive characteristics of Redkloyd. According to Dr. Wallace, "We will be looking for the same high, total plant weight plus a high harvest index (percentage of total plant weight that is seed). This would give us the desired greater yield — our next objective."

Meanwhile, in another department of the College, Cornell floriculture researchers are answering the public's increased demand for smaller sized potted plants.

After extensive study and experimentation, several types of flowering and foliage plants have been determined able to grow efficiently and inexpensively under commercial conditions in New York State. These varieties include the American First Lady marigold, the Pacific Giant Jewel Mixture primrose, and the Peter Pan Orange and Pink zinnias, plus several others.

"The low cost involved in the care of these plants will enable growers to supply shops and stores with quality plants that can be sold at pence ranging from 99 cents to $1.29 per plant," said Prof. Carl F. Gortzig, chairman of the Department of Floriculture and Ornamental Horticulture.

Besides identifying other plants that can be produced efficiently, researchers will soon be looking into the possibilities of more efficient marketing.

This article ends with a report on potted plants, but Cornell research certainly does not stop there. Although we may be unaware of their efforts, agricultural researchers are continually searching for newer and, often, better ways of doing things.
For those of us who have braved the Ithaca winters, suffered through “all-nighters” and consistently missed the Dean’s list, it may be difficult to view Cornell as a vacation spot. But hundreds of people who attend Cornell Alumni University do. Since its establishment in 1968, CAU has offered courses ranging from ornithology to gourmet cooking. CAU director, G. Michael McHugh, calls it “the vacation for the head.”

While adults are attending classes, children enjoy a variety of educational and athletic activities with counselors. Families eat breakfast together and reunite for dinner.

The curriculum this year includes two multi-disciplinary courses and eleven workshops. The topics for study this summer will be: The United States 1976: Can the Republic survive another 200 years? and Who Killed Education: Will the decline in academe result in the demise of democracy?” The faculty roll reads like a list of Who’s Who at Cornell University and this year includes Prof. Daniel Sisler, agricultural economics; Prof. Werner Dannhauser, government; and Prof. Vernon Rockcastle, science education.

In the workshop segment, Russell C. Hamilton is offering courses in Photography and Dark Room techniques. Prof. Barbara Troxell will examine Opera: Its Pleasures and Problems. You may examine your lifestyle in Prof. Heinz Biesdorf’s course on Coping with Inflation. These and seven other workshops range in price from $190 to $225. The two multi-disciplinary courses each cost $190.

Included in the course and workshop prices is a room in Mary Donlon Hall, or the Donlon Hilton, as it is affectionately (if not humorously) called; and two meals a day. An empty fifth floor serves as a buffer zone protecting studious parents and singles from the enthusiastic roar of their teenagers, on the top floor. The living arrangements are designed for the comfort of everyone.

The summer program for children and teenagers combines physical activity with an intellectual environment. Arts and crafts, swimming, canoeing, hikes, naps and parties break up the children’s days. Teenagers are encouraged to explore their own areas of interest in directed activities around campus and may participate in drama and astronomy workshops. This year, an admissions panel will meet each Monday in July for the benefit of the college-bound participants. There are live-in counselors for children and teenagers. Parties, hay rides, sports and picnics help to make the vacation memorable for the teens.

CAU appeals to many alumni who otherwise might

Pro. Tsu-Lin Mei, Asian Studies, lectures during the course on China, given several years ago.
not return to Cornell for reunions. For faculty and students' CAU is a stimulating environment. Conversations in cafeteria lines are spontaneous. People are eager to share insights and exchange rhetoric. The varied backgrounds of the 'students' is sometimes reflected in their perspectives on the topics studied.

"The feedback from adults is much different from students," according to one former faculty member. "Adults tend to think much more critically than students." Cornell president Dale R. Corson believes this response "keeps the faculty on its toes."

One woman was relieved that "this is one vacation where you talk to your husband about something besides the mortgage, the kids and the bills." An attorney from Vestal, New York, thinks of CAU as "a smorgasbord of ideas to go home and think about."

CAU has expanded the program now to include spring and fall weekend excursions to such exotic places as Shoals Marine Laboratory, ten miles off the coast of Portsmouth, New Hampshire.

CAU is responding to a need in continuing education, according to program director, G. Michael McHugh. "It fulfills part of Cornell's land grant mission," McHugh said.

The environment at CAU encourages intellectual stimulation and new insights. It is a vacation that allows you to bring home more than a box full of colored slides. As Mr. McHugh says, it's a "vacation for the head."

A young bird-watching enthusiast gets some pointers from the late Prof. Peter P. Kellogg. Professor Kellogg was a co-founder of the Laboratory of Ornithology.

Kids observed brightly-colored dye flushed down toilets in homes along Fall Creek, then checked to see if the sewage lines polluted the Creek.

Children get to play firemen (and firewomen) with real equipment on a field day with local smoke-eaters.
READING

No one finishes Madame Bovary.

WRITING

The feet are important to study.

AND RESTING

A quick count in Mann showed one out of seven students sleeping.
THE ABC AND Zzzzz OF STUDYING

SOME STUDY INTENSELY

AND OTHERS DON'T
When I called Margaret Stone, senior curator of the L. H. Bailey Hortorium, chairwoman of the Provost's Advisory Committee on the Status of Women, photographer, writer, a Ph.D. in Botany, a former teacher in the Philippines, wife, and the mother of three grown children, she said, "I don't think I would make an interesting article." But I persuaded her to let me come up to her office in the 4th floor of Mann Library anyway.

As I opened the door, I was greeted with her warm smile. Mrs. Stone is a tall and imposing looking woman, and she was wearing a brooch with pressed ferns and small yellow flowers. I soon learned what a multi-talented and modest woman Mrs. Stone was.

Next I spotted a collection of about 15 miniature plants. When Mrs. Stone noticed my interest, we walked over to a collection of Sinningias. Then patiently she explained the different characteristics of each plant. "This one has a yellow throat... see the different color of the veins or notice the tubular shape of the flowers. This one — with a ruffled shape — that's a Cindy-ella."

We sat down near her desk. Mrs. Stone proceeded to tell me an anecdote about Dr. Liberty H. Bailey, who developed an interest in palms in Jamaica when his wife asked him the name of a particular palm. He became an expert on palms at 79. Mrs. Stone laughed and added, "There's time for me yet."

Across the hall from her office is one of the world's largest collection of palms. Dr. Harold Moore is currently carrying on the work of Dr. L. H. Bailey in the field of palms.

"I am trying to get more women started in science but it would be easier to start with younger women," she said. She is now serving as national president and president of the local chapter of Sigma Delta Epsilon-Graduate Women in Science, Inc.

"My Botany professor in college was good to me. We didn't have the term role models then, but I was encouraged to make a success in botany, and I realized how important this professor had been in my life," she explained.

She said she didn't know why stereotypes about people's roles existed, and is glad that it is changing with more men becoming interested in home things. "Life is more exciting when you have broader options," she commented.

"I wish that the term "women's lib" had never been invented. I also believe that there is a lot of fear about women's rights," and Mrs. Stone asks, "Why shouldn't we have the same rights as human beings?"

Mrs. Stone was able to use her college education during one of her husband's sabbatic leaves. The Stone family has been exposed to "many wonderful experiences," as a result of these trips. In 1958-1960, Mrs. Stone held a position as "special professorial lecturer" at the University of the Philippines. She especially enjoyed offering her skills and "being able to be of service to the Philippines. A lot of well-educated, well-trained women have no way of utilizing their education because of the severe shortage of part-time jobs. This is especially true in the Ithaca area because some women find themselves here because their husbands are here." She added, "But it is a bad time for men too."

President John F. Kennedy set up a commission to find out what women were doing with their Ph.D.'s. Many women responded, "little — because of my husband." But Mrs. Stone's response was, "I had to go to an underdeveloped country before I could be of some use."

Margaret Stone examines an Aeschynanthus, commonly known as a Lipstick Vine.
In the Philippines, she taught introductory botany courses. She brought in native painters who painted the parts of the tropical flora on large charts. Mrs. Stone suggested that other teachers supplement their courses with reprints from scientific journals.

"When we travelled, we always went as a family. My husband was willing to take the whole family with him. These trips were marvelous experiences which brought the family closer together," she explained. "Now when our family gets together and we share our traveling experiences, we say, 'Remember when people thought you were so tall for your age?' At one point the children even had a pet monkey."

The next two sabbaticals sent the Stone family to Switzerland and New Zealand. Mrs. Stone feels that since her children traveled often, they received a different perspective of the world. They also got a chance to meet interesting people.

In North Island in New Zealand, the Stones met a graduate student who invited them to visit his family in Western Samoa. “Even though the children couldn’t talk with the native children they played with each other. When we left they gave us presents of Tapa cloth (pounded bark of the mulberry tree). They had made gifts and had given them to us because of their general friendliness.”

Mrs. Stone’s travels gave her an opportunity to study and document the flora of each region. In high school, her father gave her a camera, and in college she began taking photos for her botany professor. These early experiences in photography enabled Mrs. Stone to take numerous slides of the world’s flora.

“I guess photography has kept my perspective,” said Mrs. Stone. While in the Philippines she donated a collection of slides to be used by future botany students. She has also used her photographs to illustrate horticultural magazines. For example, she shot a recent photograph for the cover of the American Gloxinia and Gesneriad Society magazine, one of many articles she has written for horticultural magazines.

Currently, her main problem with photography is getting blue and pink flowers depicted in their true color. “This problem is due to the difference between the spectral sensitivity of the film and the colors perceived by the eye,” explained Mrs. Stone.

On her desk sat two packages of unopened slides; she told me that they were for a talk she was preparing in June. She gives seminars about the various functions of the Hortorum, and about specific types of flora.

“I test a role of film. I make a complete record of exposure time or whether I used a blue filter or not and then I view the slides,” she said. “Then I can see what kinds of improvements I can make because I know I can get the color just right.”

Sometimes a flower contains more red than the eye sees but Mrs. Stone’s main interest is in duplicating the color of each flower to exactly the same shade as viewed by the human eye.

In another room nearby, Mrs. Stone stores her photography equipment. A cardboard box contains a stopwatch and modeling clay. When she takes pictures of plants, part of the secret is to show certain characteristics, and sometimes a sticky substance (some people use chewing gum) aids in getting the plant placed in a natural position.

A ruler or a penny is included in the box in order to have a known object with which to compare the plant’s size. Sometimes, to get the plants photographed in positions, black thread is used. She also has some styrofoam, black velvet cloth, and photography tape that lets her secure an ideal background for her photos.

From her photographing "studio," we proceeded to the greenhouse, off Plant Science. She has a quick gait, like that of a woman who has accomplished so much. As we entered, she spotted a plant with some dried leaves and she began to pull the leaves off gently. “Every time I come down here, I see something that needs attending to,” she said. She gave me a tour of the greenhouse, with an emphasis on the African violet family.

As we walked around in the greenhouse, she shared many common and scientific names with me. Mrs. Stone picked up an African violet and said, “This plant is from Africa but technically it is not a violet.”

Margaret Stone smiled, as I thanked her for the interview. She told me that I could stop by any time, and after our three-hour visit, I closed the door behind me, amazed and bewildered. I wondered how Margaret Stone could ever think that she wasn’t an excellent subject for an interview.
Bottle feeding may be killing infants in the world's developing nations, according to two Cornell nutritionists. "In many instances, placing an infant on a bottle might be tantamount to signing the death certificate of the child," say Prof. Michael Latham, M.D. and graduate student Ted Greiner of the Division of Nutritional Sciences.

The nutritionists say there are two main reasons why bottle feeding is frequently dangerous for infants in developing nations. Household hygiene is one problem. Family water supplies in underdeveloped areas are frequently contaminated. Almost no poor families can afford refrigerators to safely store mixed formula. Often, there is insufficient equipment in the house to adequately clean bottles; sometimes, the bottles themselves are cracked. There is widespread use of virtually uncleanable soft drink bottles for infant feeding. Many mothers in developing nations, according to the nutritionists, do not even understand the bacteriological concept of disease. "Mortality statistics from most poor communities show that gastrointestinal infections are the largest cause of infant deaths. The pediatric wards of tropical hospitals are full of babies dying of this man-made disease," say the researchers. Breast fed babies are better protected from infection.

Professor Latham says the other major problem with bottle feeding in poor countries is overdilution. Infant formulas, frequently imported from the United States or Europe, are priced high. The combination of high price and relatively low family incomes encourages mothers to over dilute the mixture in the bottle. "The infant may be given the correct number of feedings and the recommended volume of liquid, but each feeding is too low in its content of calories and other nutrients. The result is a slow, but inevitable, development of nutritional marasmus," explains Professor Latham.

Ted Greiner, an M.S. candidate in the Division of Nutritional Sciences became interested in the problem while taking Professor Latham's class in International Nutrition. Utilizing the newspaper collection at Olin Library, Greiner studied advertising for infant formulas. "I began to realize the ads were showing up only in the newspapers aimed at poor people," recalls Greiner. He began to see a widespread, systematic campaign on the part of multinational companies who manufacture infant formula to convince mothers in developing nations not to breast feed their babies.

Greiner began a major study of the process of promoting bottle feeding in underdeveloped nations by major companies. He surveyed 309 different newspapers and magazines, most of them part of Cornell's extensive South East Asia collection. In all, Greiner looked at more than 1,600 individual copies of newspapers. He then garnered samples of infant formula advertising from the world's medical journals, as well as examples of promotional posters used in health clinics in developing nations. The result of his study is an 80 page monograph published by Cornell last year. Professor Latham contributed the introduction to the booklet, titled: "The promotion of bottle feeding by multinational corporations: How advertising and the health professions have contributed."

Greiner broke down the newspapers into two categories: those aimed at high-income readers and those aimed at low-income readers. The results of his study show that a considerably higher proportion of advertisements in developing nations are aimed at convincing poor families to bottle feed their babies. "Thirteen percent of newspapers for low-income readers had infant food ads, while only two percent of newspapers for high-income readers had them," says Greiner.

He says that many companies, but "not all of them," deny that they aim their advertising toward low-income readers. The monograph contains many examples of these newspaper advertisements. Many of them show a native mother holding a healthy baby. Copy alongside the photo explains that the brand of infant formula can help produce strong and healthy babies. "Mothers in Third World countries know that babies die, and they know that babies are fat and healthy in America. They're willing to spend the money to buy, what they think, is necessary for their baby's survival," explains Greiner.

A company-paid health teacher can convince the women to switch their infants from breast feeding to bottle feeding.
Are you tired of that big V-8 engine that continuously drains your wallet and puts you on a first name basis with your mechanic? If so, Cornell's College of Engineering can offer you some relief.

Students from both the School of Electrical Engineering and the School of Mechanical Engineering have recently completed construction of their latest and most successful electric automobile. Working under the supervision of Prof. Joseph Rosson and Associate Prof. A. R. George, these students combined their expertise and experience to produce, what may be, a prototype of tomorrow's car.

Unlike conventional internal combustion engine cars, Cornell's Car No. 5 (Alfa) is powered by an electrical system composed of a 25 HP General Electric DC motor. The motor receives its voltage from 14 6-volt batteries and one 12-volt battery; thus, the need for petroleum products is completely eliminated.

Because the electric motor and its batteries have a combined weight of over a half ton, a strong, durable chassis was needed. In addition, the framework had to allow for all the maneuverability that one expects from a well-designed vehicle.

With these factors in mind, Cornell mechanical engineering students, Al Balcewicz, Daniel Costanza, and John Blanchard designed a chassis that met the required specifications. After considering numerous options, the students finally decided upon a modified VW chassis which would be reinforced with a specially built frame composed of small metal tubes arranged in a special pattern. As an added attraction, they decided to top the whole thing off with a replica of a flashy 1931 Alfa Romeo roadster body. Then, with its unique motor and extraordinary design, Alfa was ready to be tested along the rugged roads of Ithaca and upper New York State.

Donning goggles, scarves, and old-fashioned driving coats, the students decided to drive Alfa around campus and various other roads in Tompkins County. As they passed bewildered eyes, they took careful note of how well the engine was standing up to hills, curves, and other stress conditions. Most were pleased with its handling performance.

In addition, students also observed the various acceleration rates of their new brainchild. One trial run showed that Alfa could go from 0-20 mph in six seconds, 0-30 mph in nine seconds, and 0-40 mph in sixteen seconds. Although the rates do not compare with those of larger, combustion-type engines, they are, nevertheless, an improvement over previous electrical models.

In testing the car for range, the students found that Alfa was able to travel 70-80 miles at a constant speed of 25 mph. When driven between 25-35 mph (with 105 stops) it covered a distance of 60 miles. However, as with all battery powered motors, Alfa has to be recharged for several hours before operation of it can be resumed. Because of this factor, Alfa, like many of its predecessors, is impractical for highway driving.

With improvements, though, it may be considered a second car suitable for local driving. One can then use the car for trips to the supermarket, for going to school, and for making deliveries during the day, while he recharges the car at night. And, because no gas is re-
required, the consumer is no longer faced with the problem of “stop and go driving” which has repeatedly been shown to be the fastest way to eat up a tank of gas.

Because of the problems of having to be recharged, as well as not being able to attain higher speeds, commercial production of the electric car has been undertaken only by small vehicular companies. As Professor Rosson relates, corporations such as General Motors and Ford are reluctant to mass produce a car that can travel only short distances. Because it would be extremely difficult and expensive to set up an assembly line for an automobile that requires a great deal of manual ingenuity, these companies prefer to sit back and observe the progress of their smaller counterparts.

Although Professor Rosson does not foresee conventional mass production of an electric car, he does envision the day when such a car might be presented to

Mothers Lack Money To Buy Infant Formula

Another major promotional technique is to use the health professionals in the country to distribute samples and information about the infant formula products. Greiner claims, “According to advertising agencies that I talked to in the Caribbean, (infant formula) companies have discovered it is most effective to advertise directly to health professionals. Imagine what a Third World mother thinks when she gets a free sample of infant formula from her nurse or doctor.” The professionals pass the free samples on to the mothers. If the baby stops nursing from the mother long enough, the mother will cease lactating. A customer is created. “The companies can claim to be very responsible, because they’re giving away free food,” says Greiner while shaking his head.

The companies also hire health professionals to travel throughout underdeveloped areas explaining how bottle feeding works. According to Greiner, the company paid professionals are frequently better paid than the country’s own health service officials. This attracts many

Give baby love and care

Bring baby to hospital for regular medical advice and with proper feeding, baby will grow strong and healthy.

This poster is issued by NESTLE - the people who care for babies & mothers

Continued from page 13

the consumer in the form of a kit. This kit would contain all the necessary parts and, if manufactured in the correct way, could be assembled over a span of several weeks. Of course, the consumer would be expected to have some mechanical know-how. However, since he is the one who is assembling it, there is no doubt that he will realize a considerable reduction in transportation costs. In an age of inflation, this has to be considered a vital marketing factor.

In addition to designing purely electric automobiles, Professor Rosson and his associates will soon begin construction of a “hybrid” car. As the name implies, the car will be equipped with a combination gasoline-electric engine. Thus, it is hoped, the hybrid will be able to provide the consumer with greater speed and range without the huge amounts of toxic emissions that are prevalent in conventional combustion engines.

Continued from page 12

of the best local professionals to work for the company’s interests, rather than the nation’s.

The infant formula companies also provide local doctors with free literature and posters. Color photos in such brochures are sometimes the only ones available to a doctor or health nurse to show what healthy babies look like. Greiner says he has seen posters in health clinics which have the advertisements cut out. Doctors remove them so that visiting mothers are not subjected to the advertising message.

Greiner is currently working on another project which will recommend solutions to the problem of such advertising in developing countries. In an interview, he outlined some of his proposals: “Health officials from each country must decide what types of infant food are necessary and stop unrestricted importation or local manufacture of other types. They must control advertising on the tin itself. Local health officials must warn mothers that once formula feeding starts, they cannot go back to breast feeding. They must make the mothers ask themselves, ‘Is there enough money in the house to continually buy infant formula?’ Public service campaigns are needed to promote breast feeding and discourage formula feeding. This is necessary to counter the advertising that has already run. Finally, there must be an absolute prohibition of all advertising and promotion of any commercial products for infant feeding in Third World nations.”

But Greiner points out that the only developing nations that try to restrict such advertising are Jamaica, Nigeria, and Papua New Guinea. Without efforts to curb the widespread promotion of bottle feeding, many infants in developing nations will continue to die.
Positive Action Council Founded

Last semester, Dean W. K. Kennedy and other members of the administration met with the student presidents of clubs and organizations in the College of Agriculture and Life Sciences to discuss the need for a centralized form of student government. Since that meeting, a group of concerned students has met regularly to establish the bylaws of this new advisory body. AG-PAC, an open forum which all students are invited to attend, represents all of the College's clubs, organizations, honoraries and fraternities. Because of its many opportunities for interacting with the Ag campus community, AG-PAC has attempted to coordinate and promote the activities of the College's organizations and thus help them maintain their memberships and viability. AG-PAC hopes to greet the Freshman Class of 1980 with a pamphlet which will alert them to the various club and organizational opportunities on the Ag College campus. AG-PAC's primary role, however, will be to serve as a representative source of student opinion for the Administration, the Student-Faculty Committees, and the University Senate, and to continue to open pathways of communication between the administration and the student body.

Constance E. Cook '41 and Law '43 has been named to a statewide Advisory Council on Equal Opportunity for Women which was recently established by Ewald B. Nyquist, education commissioner. Cook, a former New York State assemblywoman and a former University trustee, is presently an adjunct professor of communication law in the College of Agriculture and Life Sciences. The council, according to the N.Y.S. Education Department, will assist the commissioner and the department's Task Force on Equal Opportunity for Women, focusing, in part, on providing equal opportunity for women as students and faculty members in higher education.

Carl S. Winkelblech, a specialist in soil drainage and tillage at Cornell's College of Agriculture and Life Sciences, has been named Professor of Agricultural Engineering Emeritus. He has retired after 21 years with the College. Winkelblech was an early innovator in the development of tillage equipment and techniques in New York.

Peter L. Marks, assistant professor of ecology and systematics, is one of 44 faculty members of the State University to be honored for excellence and innovation in undergraduate teaching. Together with Prof. Brian F. Chabot and Hugh G. Gauch, all of the section of ecology and systematics of the Division of Biological Sciences, Marks has received a grant from the State University to develop laboratory exercises in plant ecology. The funds will be used by the group to aid student analysis of plant communities and the study of the physiological adaptation of plants.

Cornell Hosts Science Congress

College professors aren't the only ones doing productive research and some high school age scientists will try to prove that claim at the 25th Annual New York State Science Congress May 21 – 22.

The science congress will bring approximately 25 outstanding students together from high school, county and regional science fairs for the final rung of eliminations across the state. This year's congress will be hosted by the College of Agriculture and Life Sciences under the organization of the Science Teachers Association of New York State.

Each participant will give a lecture-demonstration or present a research paper on topics ranging from basic biology to computer simulation. Questions will be posed by seven Cornell faculty members who will comprise the science congress judging committee. All exhibits will be on display for both days of the congress and most events will be open to the public.

The congress will also feature these notable Cornell professors: L. Pierce Williams, Carl Sagan, William Keeton, Thomas Eisner, Harold L. Creal, '21, was one of two New York State farmers to recently receive Awards of Merit from the Department of Animal Science at the N.Y.S. College of Agriculture and Life Sciences. The plaques were presented "in appreciation for outstanding contribution to the New York dairy industry and to programs of the Department of Animal Science." Creal, formerly a director of Agway, Inc., was among the first to recognize the need for educational efforts for farmers and research in artificial insemination.

The Alumni Association of the College of Agriculture and Life Sciences will hold its annual meeting and breakfast June 12, 1976 at 8 a.m. in the North Campus Union. Retiring faculty of the College will be honored on this occasion.
Get Involved In A Student's Education

Today's students come to the College of Agriculture and Life Sciences better prepared than ever. They expect and get a top-notch scientific education. They're deeply involved, and concerned with working to find innovative approaches to solving some of the big problems -- like the world food crisis. But it's getting harder to provide the kind of education they need. Every year, research at Cornell and elsewhere pushes forward the frontiers of knowledge. For students at the College this means there's more to know every year. Faculty, equipment and library resources must keep up with the pace of progress. This takes money. Money for special research projects, money to help support innovative teaching programs. Money to help academically qualified students meet rising tuition bills.

You can help these students by supporting the College of Agriculture and Life Sciences Fund now. For information on gifts of real estate, property, deferred giving and bequests write:

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