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CORNELL COUNTRYMAN

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Welcome Freshmen



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THE MAN ON THE COVER: ANDREW DICKSON WHITE

Andrew Dickson White is a celebrity at Cornell. Any Cornellian knows that White was the university's first president, and the better informed student of history may recall some stories about White the Senator. But how many people realize that he had a full career in diplomacy during his twenty years at Cornell and after?

White joined the diplomatic service long before he met Ezra Cornell, who persuaded him to put politics temporarily aside and shape a University with him. Having developed an interest in the "diplomatic relations between modern states" when he was at Yale, White was a logical candidate for the foreign service.

His first appointment as attache at St. Petersburg in 1854 prepared him for the important ministerial positions he gained later. However, White didn't like Russia and summed up his experience succinctly: "A little of Russian life goes very far."

After serving as commissioner to Santo Domingo in 1871, White was appointed minister to Germany and served there between 1879 and 1881. He left Germany with strong opinions on the way his country should choose and train the foreign ministers who would follow him.

During this period in history, personal influence, family background and important friends often were the keys to getting government appointments abroad. Some ministers couldn't speak the language of their countries and other men refused to take the job seriously.

In fact, officials sometimes looked on service in foreign nations as a handy ticket for government-paid sightseeing. White himself admitted after his appointment as commissioner to Paris in 1878 that "I was not inclined at first to take my appointment seriously, but went to Paris simply to visit the exposition."

A violent enemy of the "spoils system", he campaigned to make an appointment, whether domestic or foreign, a reward of merit. He worked to raise salary and improve procedures so as to attract good people to the foreign service.

The contributions Andy White made in the area of diplomacy and service to his country qualify him for the title of Diplomat as well as Educator.

— Barbara Jean McCallum

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EDITORIAL



The Class of 1970 has four wonderful years ahead. Not only will these years be filled with new developments at Cornell, but the next decade may well be remembered in history along with the Stone Age and the Jet Age as the Education Age.

At Cornell, a new schedule, changes in student living designs, new shapes in curriculum and class structures and more buildings mark only a few of the changes to come.

However, these physical and organizational changes are not the important factor for the entering freshmen. The years ahead will be, as they have been called many times before, the best years of your lives. If the expression seems over-used, that's probably because it is proven true with each student who passes through Cornell.

It would be foolish to sermonize here. Within a few short months, there will be very little we could tell you

that you won't have learned all by yourselves through good and bad experiences.

But remember one thing, whatever your goals at Cornell, they are "reachable" if you are only honest enough to evaluate your objectives realistically and then pursue them. Don't let the plans and desires of others interfere with or over-influence your own development, for one of the most difficult roads to follow is the path to individualism.

Another point, choosing the right major is probably the most important single decision you will make in four years at Cornell. An impulsive or unconsidered move in the selection of an area of concentration has often been responsible for much unhappiness and poor accomplishment. So do your own thinking and evaluate your own desires and capabilities before making this decision.

From the staff of the Countryman to the Class of 1970 — "good luck". We know you won't need it.

SOMETHING NEW

With this issue of the Cornell Countryman we present a new face which we hope will be acceptable to our readers. This is the first issue to be printed by the new Harris Intertype Fototronic System, owned locally by Wilcox Press, Inc. The majors in Communication Arts now will have an opportunity to work with the most modern

(the fourth installation of its kind in the world) phototypesetting system known today. Letterpress has been used to print this magazine since 1904, so this change to computer typographics and offset is a dramatic one. However, the majors welcome the more exacting disciplines involved, and the opportunity for a more aesthetic face.

THE CHANGING FRESHMAN

By MARIA MELNYK '68

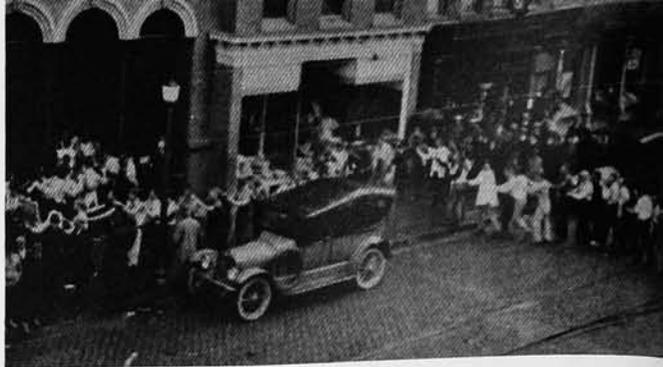


October 1865 to October 1966—over 100 years have passed since the first freshman class arrived at Cornell. Time has changed the University, and it has changed the freshmen. The 2400 sophisticated new Cornellians that arrived this year from various states and from many foreign countries bear little resemblance to that first group of 412 that gathered here in 1865.

The pioneer students were mostly young farmers from New York State. When they arrived, Morrill Hall and White Hall still had not been finished! Only Cascadilla Place, where the faculty, their families and the students lived, was ready, although some of the students didn't have doors for their rooms until midwinter. And to reach Cascadilla Place, they had to go by a cowpath on the Cornell farm and over gorges and streams with no bridges. These students, faced with such original problems, were the ones who started many Cornell traditions.

Early in Cornell's history, class dinners were very popular. Each class spent much time planning its dinner, and the class below spent even more time dreaming of ways to break it up. One of the favorite methods of disrupting the dinners was kidnapping the class president, who officiated on these occasions. Dr. Stanley W. Warren, professor of agricultural economics, tells of a tale that was told him by Prof. Rice, who graduated from Cornell in 1890, and for whom Rice Hall was named.

When Prof. Rice was a freshman, the sophomores had a great plan to prevent any interference with their banquet—they hired a caterer in Geneva and planned to have the food brought down by train. For a while the freshmen were stumped, since they couldn't track down where the preparations were being made. But, as Prof. Warren says, "A secret known by a whole class isn't a secret," and soon the Frosh discovered the plans. They then sent a telegram to the caterer in Geneva and signed it "the sophomore class". The telegram stated that the freshmen knew what was going on so the plans would have to be changed. Therefore, would he please send the food to the Trumansburg Opera House, rather than to Ithaca. On the day of the dinner, the Frosh rented every wagon and carriage available, even getting control of the



"Rushing the Strand" — After a traditional bonfire, the Frosh would snake-dance into the theater without even paying.

switch engine, and left for Trumansburg. By the time the sophomores caught on to what had happened and the first of them straggled up to the Opera House, the Frosh had eaten their banquet!

Then there was another tradition—the Mud Rush, a contest between the freshmen and sophomores. Fire hoses were turned on lower Alumni Field and the ground was soaked for a few days. When it was good and muddy, the Mud Rush began. The students tried to push a hugh ball across the field. In the process, they shoved and jostled each other, then got even rougher. It always ended as a grand melee, with students pushing each other into the mud and tearing at each other clothes. Often people were hurt, so this tradition gradually died away. By 1923, it was quite dead.

Prof. Warren entered Cornell as a freshman in the fall of 1923. He smiles when he relates his first year escapades. In his day, they had to wear gray Frosh caps with black buttons and tiny visors. Stores gave them away, and most freshmen wore them willingly. In winter, they wore the Frosh Toque, which was like a wool ski cap with a long black tassel. Some students stuck a stiff wire into the tassel and made it stand up straight.

The freshmen wore their caps until the Friday of the week after Spring Day. On that day they had their "cap burning" after which they became sophomores socially. They gathered together all burnable junk and piled it either on upper Alumni Field or on the cow pasture, which is now the Veterinary College. The sophomores felt it was their duty to burn the trash pile before the Frosh got there. Professor Warren recalls one year when the freshmen, to prevent this, kept their collection of boxes and wood piled on trucks which were concealed.

Just before the ceremony was to be held, the trucks drove in, dumped the trash, and the traditional fire was made. The Frosh then "hooped and hollered" and threw their caps into the fire. After that, they snakedanced their way to Sage and serenaded the girls who lived there. Then they "rushed the Strand." That is, they all walked into the theatre without paying. At that time, the Strand had Vaudeville during the last part of the week, so the

Frosh interrupted live acts. The management tried to stop this, but not too seriously. They just hoped the place wouldn't be completely wrecked.

This "monkeybusiness," as Professor Warren calls it, was still going in the early 30's. Professor John P. Hertel, secretary of the College of Agriculture, and a Cornell Freshman in 1930, also remembers the beanies and the cap burnings. He recalls the fun they had snowballing the trolley car conductors. This sport went out with the streetcars in 1934.

In 1923 the Seniors of the College of Agriculture came to the Director of Resident Instruction and reported that they had had problems as freshmen adjusting to the system at Cornell.

Fortunately, the College responded to the students' suggestion and started a course in Orientation. It began as a meeting of the entire freshman class twice a week. The lectures were presented by speakers from the various departments. This method was not too popular with the students, so the group was divided into smaller classes which met once a week. This is the system the College has now. However, Professor Hertel points out that the classes are getting larger again since the number of new students is increasing. Soon the discussion groups may get too large and unwieldy again.

After World War II, the veterans who entered Cornell as Freshmen were much more serious and dedicated to their work. They wanted nothing to do with Frosh Caps. Therefore, cap burning went out, and "rushing the Strand" died with the death of Vaudeville.

There was another tradition that didn't disappear until relatively recently — Spring Day. Originally, this was known as Navy Day, since it was started with the idea of raising money for the crew. On this Saturday there was a big parade with floats decorated by the fraternities. After the parade, the fraternities set up booths on Alumni Field and they held a carnival. At one of these affairs, a barker announced that a big Communist plot was to be unveiled. Curious students entered the tent and found it empty. After a while two men entered from opposite sides. They walked to the center of the area and one said to the other in a stage whisper, "Tonight we burn the swimming pool." The students were then charged 50 cents to leave the tent.

On the Spring Day of 1958, many students got drunk and threw eggs at the passing parade. One person fell off a balcony and broke his neck. Gradually, another tradition passed away, although Spring Day is still a University holiday.

What has caused this change in Freshmen? They are still eighteen, yet they are involved in little of the "monkeybusiness" their predecessors indulged in. Professor Hertel blames the change on the increased academic pressure. As competition becomes stiffer, University standards must rise. High schools must turn out more capable seniors.

W. Daniel Fitzpatrick, assistant dean of students, agrees

with Professor Hertel. He gives two reasons for the change in freshmen: the higher caliber of incoming students and their greater determination to gain an education. Many freshmen now feel that their courses are not challenging enough. They claim they've covered the material in high school. The overall men's average has increased from 75 in 1956 to the present 77. Now at least $\frac{1}{3}$ of the students plan to attend graduate school.

All these pressures have changed the academic atmosphere, leaving little breathing space for Mud Rushes and other pranks. Due to inadequate housing and unrest about the quality of undergraduate education, the freshman enrollment has been cut. This will bring an even greater increase in the competition, and therefore, in the quality.

This year acceptance into Cornell has been especially difficult. Congratulations to those who made it and best of luck for the next four or five years. In *Behind the Ivy*, Romeyn "Rym" Berry, manager of athletics at Cornell from 1920 to 1934, has this to say about Freshmen:

"I like to look in their eyes... In them, and others like them, lies the only hope of a threatened civilization."

A mudrush poster pointing out the obvious qualities of the Class of 1910 and showing the fate of the unlucky 1911's.

Bushwah Frosh!!

"No use on Earth,
No use in Heaven;

To Hell! To Hell!
With 1911!"

For intellectual sterility.
Lack of due humility.
And general debility
Give us the rough-neck frosh:

But we'll show them with agility
The really great senility
And absolute futility
Of opposing us, by Gosh!

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COUNTRYMAN CAPSULES



Myron D. Lacy, professor of animal husbandry in the College of Agriculture, won the 1966 Pfizer Animal Science Extension Award for distinguished service to the nation's livestock industry. A bronze plaque and a check for \$1,000 were presented to Prof. Lacy at the annual meeting of the American Society of Animal Science held at Rutgers University.

A Cornell graduate, **James R. Hubbard, Jr.**, extension poultryman at Auburn University, is the 1966 winner of the Pfizer Extension Teaching Award of \$1,000 and a plaque. Mr. Hubbard received his M.S. degree from the College of Agriculture in June, 1959.

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Several scientists from Cornell University and the New York State Agricultural Experiment Station at Geneva will spend at least one year at the University of the Philippines' College of Agriculture at Los Banos.

Profs. R. M. Smock, pomologist, and L. D. Uhler, biologist, of the N.Y. State College of Agriculture, and E. H. Glass, entomologist at the Experiment Station will study the fruits and vegetables of the Philippines during their stay there.

⌘

Construction of a new laboratory building large enough to stage a football game is under way at Cornell this fall.

The structure, when completed in early 1968, will house a number of plant-research laboratories and growth chambers which can tailor climatic conditions ranging from hot, steaming jungles to arctic colds.

The two-story, air conditioned, virtually windowless building will have the largest, single floor space for laboratory use on campus. It will rise on Caldwell Field on the eastern edge of the College of Agriculture.

M. Lee Taylor, (see picture), former professor of sociology at Tulane University, has been appointed to the newly created position of assistant director of research responsible for research and education on the problems of people at the N.Y. State College of Agriculture.

This is the first such administrative position established at a college of agriculture in the United States, according to Nyle C. Brady, director of research for the College.

Prof. Taylor will provide leadership in development and evaluation of research and extension programs at the College which are designed to help people meet problems and adjust to changing technology. Also, as a professor in the rural sociology department, he will devote part of his time to research projects of his own.

⌘

Prof. Orvall C. French, chairman of the department of agricultural engineering of the New York State College of Agriculture, was installed as president of the American Society of Agricultural Engineering on June 29.

Prof. French, who served as president elect, 1965-66, is the second man from Cornell to head the 6,500-member, national organization since its founding in 1907. Prof. Emeritus Howard W. Riley, served as president in 1912.

A native of Kansas, Prof. French joined the faculty of Cornell University in 1947 as professor and head of the agricultural engineering department. He serves as director of the agricultural engineering teaching program which is jointly administered by the Colleges of Engineering and Agriculture.

FROM CURIOSITY TO CORNELL

By EMILY MILLER '69

On June 6 of this year, the graduating seniors of the New York State College of Agriculture presented the annual Professor of Merit Award to Prof. William T. Keeton, and no one was surprised.

For students at Cornell, two words are synonymous: biology and Keeton mean an exciting and intriguing introduction to the vital processes of the living world.

Dr. Keeton, who teaches general biology courses and directs graduate students in evolutionary biology and insect taxonomy, feels that his career in biology stems from a boyhood interest in nature studies which he says is the case for many biologists. As a boy in Virginia, Dr. Keeton became particularly fascinated with birds and would roam his grand-parents' farm with "cheap binoculars" in hand, observing the bird-life around him and identifying the species which he saw. By the time he reached the fourth grade, Dr. Keeton had decided to become a biologist.

Much to the surprise of his colleagues, amazement of his students and dismay of his draft board, which would always return his forms with a note that the education section was incomplete, Dr. Keeton never graduated from high school. He was admitted to the University of Chicago after completing his junior year of high school.

Although he knew he wanted a career in biology, Dr. Keeton had many other interests to satisfy during his undergraduate years. In fact his first bachelors degree was in philosophy, although he followed that with a degree in zoology two years later. He earned his M.S. degree in Virginia Polytechnic Institute and his Ph.D. at Cornell where he joined the staff in 1958 after holding faculty positions at Radford College in Virginia and the Virginia Polytechnic Institute.

During the summer of 1959, Dr. Keeton traveled to central America to collect specimens for his research work in the area of evolutionary theory. He was concerned with the effect of "geographic distribution and behavioral patterns on speciation."

In this work, Dr. Keeton studied the millipede, found abundantly in the layer of humus on the forest floor. Millipedes are so numerous in certain geographic areas (as many as 28 species in just five southwestern states), that they are more easily and effectively studied than species spread out all over the world.

Dr. Keeton's most recent research, a study of homing pigeons, recalls his childhood interest in birds. Among his hobbies, he had spent a great deal of time raising and racing pigeons. It had always fascinated him that these

pigeons, let loose in alien territory, are able to fly as far as 500 to 600 miles from sun-up to sun-down, and then successfully return home.

Biologists suspect that these birds can detect compass directions either by the relationships of celestial bodies, magnetism or the earth's rotation. Although the pigeons may know north from south, no one can explain how the birds know where they are and in which direction they must fly to reach home. Dr. Keeton hopes to find an answer.

Dr. Keeton is also an author. Within the next two years his new biology textbook will be published. He feels that the book will serve an essential and complementary function when combined with his lectures. With the book as a source of the basic facts, Dr. Keeton will be able to expand upon side topics and recent research in his familiar manner. He is often known to hold a lecture hall of 300 students spellbound.



Prof. William T. Keeton

Although "it takes so much time," Dr. Keeton finds writing to be an interesting challenge. In addition to his forthcoming text book, Dr. Keeton is also the author of a book entitled "A Taxonomic Study of the Milliped Family Spirobolidae."

The new text is the culmination of four years of effort which should have ended during his sabbatical leave two years ago, but was extended because of Dr. Keeton's participation in the organization of the new Division of Biological Sciences at Cornell.

He was on the interim executive committee and was chairman of the interim curriculum committee for the Division. He is now co-chairman of the permanent curriculum committee. Dr. Keeton is a member of the Society for Systematic Zoology, American Entomological Society, Biological Society of Washington and Phi Gamma Delta among other groups.

This year, 900 students are enrolled in Biology 101, Dr. Keeton's course. They will be offered the skill and enthusiasm of a dynamic teacher, who, through lectures and personal communication with students, conveys biology with excitement. Dr. Keeton spreads the wonder of life's complexity and order.

SURVIVING

By TOM SOUTHWORTH '66

Cornell students are funny animals. They are going to a school with extraordinary things to offer. Their futures are bright. No people on earth have any greater opportunity to succeed than Cornell students. Yet they spend much of their time complaining, protesting, mumbling, grumbling, rebelling and wearing dirty pants. There must be something within them that makes them such funny animals. Ah, yes, there is . . . it's college slump. Freshmen, take heed!

What is college slump? It's everything you get from studying day and night for weeks on end. It's the gloom that hangs over your head after failing six prelims. It's what is in your mind when there is the bad taste of stale cigarettes and coffee in your mouth, and it's more.

If you have ever read for hours and remembered nothing, the slump is with you. It doesn't start with the beginning of school. It waits for some minor disappointment, then steps in behind you. It's relatively more noticeable on rainy or snowy days and less noticeable on sunny days.

The worst thing about the slump is its persistence. Once you get it, it's with you until finals are over. It lurks, creeps, and follows you with a faint odor which repulses and saddens. You can get away from it, but you can't stay away.

There is no way to eradicate the slump once it has set in. In fact, each individual has his own unique variety which can be changed only minutely by even the strongest efforts. Thus, the only way to bear a slump is to learn to get along with it. To help you, some of the more prominent and successful student methods follow.

The first category is "getting away physically". We can't really remove ourselves physically, but there are things we can do that take our minds away. The very best method is to just get away. If you have a car or bicycle or a hitch-hikers thumb, use it. Some students like to go home, but more than likely your mother will ask about school and everything will be worse.

The method of leaving town has only one drawback . . . returning. The slump is always worse after you get back. Thus, this method is best suited to hardy individuals who like big pleasures, but can take their pain in

strong doses also.

Currently more popular, is getting away for short breaks. Playing cards, tennis, football, pin ball machines and hookey are small, but helpful releases. Also, swimming, dating, dancing and going to the flicks are popular.



THE SLUMP”

Cornell offers many intercollegiate sports which one can either participate in or watch. In short, your environment abounds in anti-study, anti-slump distractions.

Category two, “getting away mentally”, refers to the mental pressures that mount so high on Cornell students.



To understand how the following methods operate, one must realize something about the very nature of students. Cornell University, for a hundred years, has existed merely for the advantage and education of several thousand riff-raff sarcastically called students. These students have one peculiarity – their irreverence. This trait covers almost everything and it is just this irreverence which is the key to mental relief from the anguish and discomfort of the slump.

Don't get wrapped up in studies or anything else. The slump thrives on those who are “gung-ho”. Not only should you stay away yourself, but you should think ill of those who are engrossed. This helps to avoid the danger of being caught up in the activities of others. The most enjoyable way to spark your own irreverence for things sacred is to split your character a little.

Stand on the quad and seriously discuss philosophical problems with others, and then go back to the fraternity and laugh about the silly intellectuals. Better still, sit in a demonstration for a couple of hours and then run down to the nearest bar and drink a few beers.

Such methods really work and they can be a lot of fun. For example, learn to laugh when you get back a 31 on a prelim. Remember that the class average was only 50. It is convenient and relaxing to develop a mental overdrive of conscious, accepted indifference to everything so that you can shift in and out easily and at any time.

Probably the easiest way to feel better about your own slump is to laugh at the problems of others. Then when you see what they are dejected about, your own problems won't seem so bad. Most students get the best results from mixing methods: leave town a couple of times between vacations, play tennis during the week, have a party or two on the weekend, chortle about the “significant” issues on campus and bark back at the dog in the Straight.

Remember, the college slump makes freshmen whimper, sophomores drink, juniors smoke and seniors swear. But 30 years from now when you think back to college days and Cornell, you'll hardly remember all your college woes. And when you do, you'll just laugh.

COUNTRYMAN INTERVIEW

Panel members for this month's *Countryman Interview* are Charles E. Palm, dean of the College of Agriculture; W. Keith Kennedy, associate dean of the College; Herbert L. Everett, director of resident instruction; and John P. Hertel, secretary of the College.

COUNTRYMAN: Good afternoon gentlemen. We would like to discuss the next four years and what they hold in store for the College of Agriculture at Cornell. First of all, what are the changes, if any, in this year's freshman class?

HERTEL: It will be a little smaller than the one we admitted in 1965. The scores will be a little higher in terms of college boards, regents averages and so forth. But there is nothing dramatically different.

COUNTRYMAN: What about geographic distribution?

PALM: About 83 per cent of the entering class will be from New York State and around 17 per cent from out of the state and from other nations. Our graduate enrollment will probably just reverse that with about 80 per cent from outside New York State.

COUNTRYMAN: Is there any specific reason you can give which accounts for the fact that the graduate enrollment is mostly from out of state?

PALM: I think that there is a conscious effort at the graduate level to draw from the best resources all over the world, and the selection is made on that basis.

KENNEDY: We encourage our students to go to other schools for graduate work and this is the rule throughout the country. . . .

COUNTRYMAN: What will be some of the major changes during the next four years?

KENNEDY: The enrollment in the next several years is

going to show a very modest increase until additional dormitories are completed, hopefully by the fall of 1970. At that time, our tentative approval for undergraduate enrollment will be 2300 with 1000 graduate students.

COUNTRYMAN: With the elimination of the freshman English course in the College of Arts and Sciences, does the College of Agriculture plan to implement a course of its own in freshman English?

HERTEL: No, there's no intention at the present to do anything except experiment. We have some students who are not very competent in expressing themselves in writing. Starting with the proficiency requirement in writing a few years ago, we have carried on a continuous experiment in this area to see how we can get these persons qualified. This involves a tutoring program in addition to regular class work.



HERTEL: *We provide maximum opportunity to explore over a wide range of course opportunity.*

COUNTRYMAN: Will there be any changes in the tutoring program this year?

HERTEL: Yes, it will be intensified this fall when the teachers of our students in the freshman humanities will be invited to refer people who are in urgent need of what we call "massive assistance". These persons are then tutored and will take the English proficiency test in December and May.

EVERETT: The chairman of our English Proficiency Committee met with the administration of the English department recently and received a very nice reception . . . They showed real interest in the overall program we have in this area and were quite interested in our approach.

COUNTRYMAN: What other changes in curriculum are planned in the next few years?



PALM: *We have to work to keep commercial agriculture strong and dynamic in the state.*

PALM: In the years ahead there will be more honors sections. Prof. Sisler has initiated an honors section in his agricultural geography course, and biology has had one or two honors sections. Entomology and plant pathology are two other units which plan to expand the honors programs.

KENNEDY: We feel that the program might be built on a sounder base by moving more slowly and experimenting with these sections rather than launch a massive program where perhaps we wouldn't have the necessary total resources to carry through. The program itself might fall down. While with these individual sections, class by class, we can do it in a first rate manner and probably serve more students better than we would to move prematurely to a complete honors program.

PALM: And another program which will be explored in the next four years will be larger programs for the exchange of students between institutions outside of the U.S. with our own.

COUNTRYMAN: What are the plans for building and expansion of facilities over the next few years?

PALM: We have approved at the present time planning money for a large animal research farm for animal husbandry which will be used to some extent for teaching facilities. Also a large animal research laboratory. This will deal with certain of the basic areas of physiology, nutrition and reproduction. We have a plant breeding facility which will be on Caldwell Field replacing the present "field house," and we have phase two of our growth chambers and greenhouses which will duplicate about an equal number of facilities for plant sciences comparable to phase one across from Morrison Hall.

KENNEDY: We hope that the state will authorize a complete renovation of the Plant Science building. This will mean modernizing the laboratories and would be a great improvement of our present facilities.

PALM: What we are hoping to do is modernize our facilities in keeping with the changes we hope to make in



EVERETT: *We have a very dedicated faculty as far as advising is concerned.*

the academic program and to provide some increased laboratory space for graduate and honors students. In the applied field, we have to work to keep commercial agriculture strong and dynamic in the state. We have to supply the leadership in the applied field that takes the basic information and uses it through the technology and innovations into production and distribution areas. . . . Our commercial agriculture will depend on how rapidly we can bring this basic information into use.

COUNTRYMAN: If we may change the subject, could you tell us how the college helps the incoming freshman with his academic and other problems?

EVERETT: Professor Hertel works with the advisors, and we have a very dedicated faculty as far as advising is concerned. The freshman meet with their advisors early and often. They go to the home of their advisor during orientation. This may seem to some as over doing it, but actually it works out to be the kind of thing most freshman respond to pretty well. They like it, and I think it makes them feel at home and makes them feel that they have someone they can talk to. If they do have a problem, I think most freshman do find their way back to their advisors pretty quick.

PALM: We hope that the idea is worthwhile of meeting with any students who would like to meet with us several times during the fall and spring terms. Maybe some of the entering students themselves will feel like coming if they have any questions.

HERTEL: I think there is good evidence that our students are highly motivated because of their strong vocational interests. They have a commitment which drives them on toward their objectives and makes them achieve somewhere near their ability. We provide maximum opportunity to explore over a wide range of course opportunity.

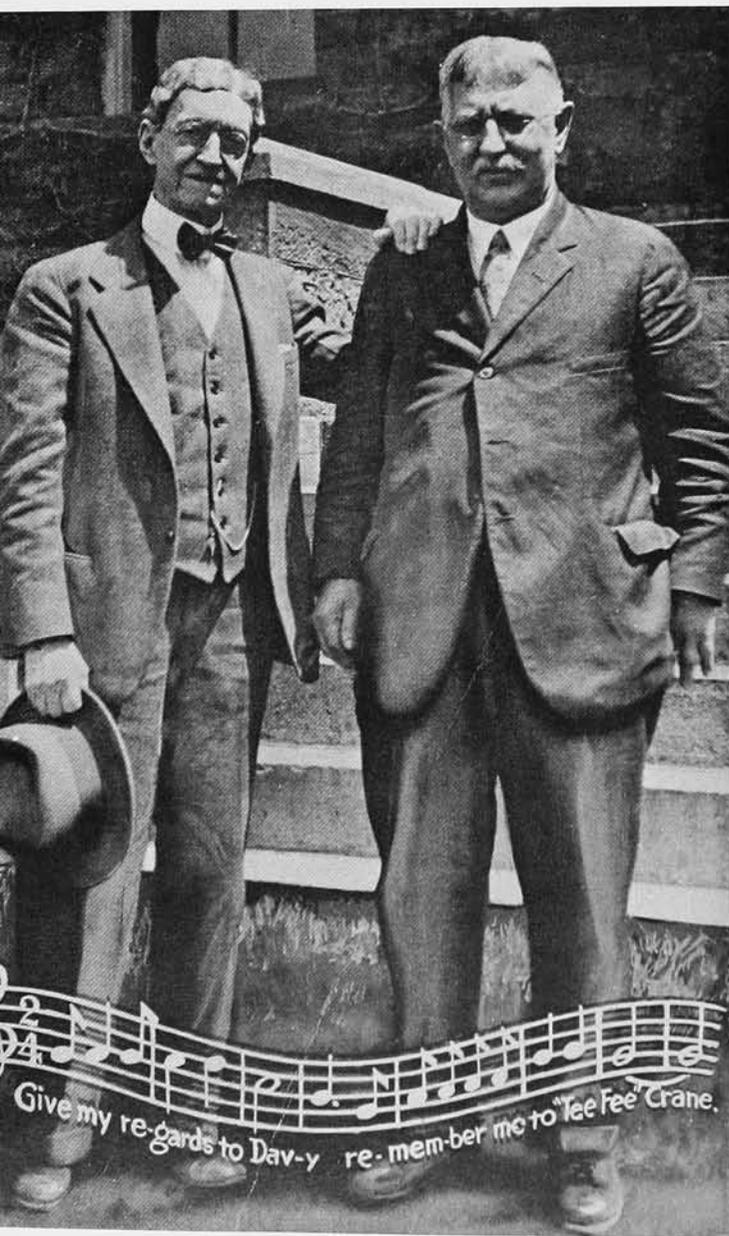
COUNTRYMAN: Thank you for your time and cooperation, gentlemen.



KENNEDY: *Enrollment in the next several years is going to show a very modest increase. . . .*

REMEMBER ME TO 'TEEFY'

By SUSAN WEINER '67



*"Give my regards to Davy,
Remember me to Teefy Crane..."*

These lines, sung at every gathering of Cornellians for several generations, are familiar to many, but understood by few. Who were these men? Why are they celebrated in song?

"Teefy" was Thomas Frederick Crane, a man who played such a large role in the history and development of Cornell that he became a legend in his time.

In the fall of 1868, when the eight-o'clock bells rang for the opening of classes, "Teefy" Crane was at Cornell as an instructor of German. He had been introduced to university life accidentally. A Princeton graduate of 1866, he would sit in his Ithaca law office studying the languages of Europe to fill the empty hours of waiting for clients.

With classes about to open at the University, Daniel Willard Fiske, German professor and librarian, was in Egypt. The University appealed to "Teefy" for help, and he accepted the temporary position as librarian and German instructor for \$800 a year.

Thomas Frederick Crane, left, better known as "Teefy", and David Hoy, or "Davy". These two partners in song are known to thousands of Cornellians in name only, but who were they?

Crane so enjoyed his new literary life that he abandoned his proposed career as a lawyer, and on Prof. Fiske's return, went abroad to learn the European languages.

Upon his return, "Teefy" became professor of Spanish and Italian and chairman of the department of romance languages. Despite his love for these languages, Crane never did pronounce them like a native. He would say with a righteous air, "I'm not going to have my pronunciation corrected by any foreigners."

Although as a professor, "Teefy" was so vehemently disliked by his students that he was called "Vinegar Crane", in his higher positions as dean of the Arts College, dean of the University faculty and acting president he became beloved by the entire student body. He was a frequent speaker at their gatherings as well as at official University affairs.

"Teefy" Held In High Esteem

The high esteem in which "Teefy" was held can be evidenced frequently in many of the events of his and Cornell's history. Although students today chuckle over stealing trays from the Ivy Room for tray sliding fun, at one time Cornell had two toboggan slides, both long removed by the department of buildings and grounds.

The first one, a wooden construction, opened at the turn of the century, and Crane, then dean and a frequent skater at Beebe, had the place of honor in front. Behind him sat President Schurman, Prof. Parson and a student recruited for steering.

A 1912 graduate of Cornell, Mrs. T. R. Briggs, remembers that "he would be first. He was always at the head of everything." She also remembered Crane's partner in song, Davy Hoy, the university registrar who was "a hard man to get up against."

Davy Wrote "Letters of Bust"

This feeling was confirmed by Prof. A. E. Wright, who graduated from Cornell in 1904 and received his Ph.D. here in 1908. Part of Davy's job, according to Prof. Wright, was to send out all "letters of bust" notifying students who had flunked out of school. Prof. Wright recalls that if Davy was hard on a student, then "Teefy" would often defend him.

Together, Davy and "Teefy" changed the registration procedure from one accomplished "by main strength and heat of passion" to an orderly procedure with students arriving in small alphabetical detachments.

Professor Wright's reminiscences illustrated another point of "Teefy's" extreme regard and interest in the students at the University. While still an undergraduate, Prof. Wright, thinking himself totally unknown to Crane,

met "Teefy" in the library one day. The famed professor said to Wright, "You are Mr. Wright, aren't you? You're interested in travel?" Crane then proceeded to offer a list of suggested books on travel which might be a help to Wright.

"Teefy" would frequently promote amateur theatricals and at one enactment of a professor delivering a lecture while suffering from gout, Crane told a reporter that the act had "wowed 'em and had 'em on the floor in rows." He was always enthusiastic.

Prof. Harry Caplan, Cornell Class of 1916 and now in the classics department, remembers Crane as a true scholar and a kind encourager to young students.

"Although I was a classicist," Prof. Caplan explains, "and 'Teefy' was a medieval historian, he befriended me because of the interest I showed in his field and encouraged me to pursue it.

Thomas Muchmore, Crane's grandson and presently a professor in the department of plant pathology, remembers that although "Teefy" was not superstitious, he used to carry around a small horse chestnut for good luck. "Teefy" gave the chestnut, taken from one of the trees around Crane's home at 9 Central Avenue, to his grandson, and Prof. Muchmore still has it.

"Teefy" Was A Popular Speaker

A striking speech that "Teefy", always a popular speaker, had made was recalled by Mrs. Briggs. He was speaking in sight of the huge elm trees which lined the Arts Quad, and he said that when he arrived at Cornell, not one of the trees had been planted. He had seen them all planted and seen them grow strong and sturdy. Crane could well compare his life at Cornell with those of the elms yielding shade and comfort.

"Teefy" himself used to tell a story to every incoming class of Cornell. He was visiting a former colleague, then at the University of Minnesota, who told him that Minnesota students also sang the "Give My Regards" song, but with no knowledge of its allusions. The colleague said that before his arrival, the students had been of the opinion that "Teefy" must be some "barkeep" in Ithaca.

*"Tell all the pikers on the hill,
That I'll be back again.
Tell them of how I busted,
Lapping up the high, high-ball.
We'll all have drinks at Theodore Zink's
When I get back next fall."*

FALL SPORTS PREVIEW

By GREGGORY MORRIS '68

Wherein Greg Morris, himself a standout basketball player and Countryman staffer, points out the names to watch for and the new developments in Cornell fall sports.

The Cornell Cross Country team, who had two wins against four losses last year, is looking forward to a highly successful season this year under new coach, Glenn Davis.

Coach Davis, who replaced Lou Montgomery as both track and cross-country coach, anticipates a strong team with four returning lettermen and five freshmen from a team that took the freshman Heptagonal race at the Columbia Invationals last year.

Standouts from the freshmen team are Gordon McKusick, Ron Nehring, Dan Ousley and Chester Judah. McKusick set a Moakley course record in last year's Harvard meet. Returning standouts from the varsity include Peter Simons and Dave Frauden.

The cross-country team will have seven contests this year, with the two most important being the I.C.4A's and the Heptagonals.

In soccer, Coach Jerry Lace hopes to use sophomores from last year's freshman team to bolster the team and help reconstruct after the graduation of his two All-Americans, Otis Curtis and Joe Osakwe.

Returning standouts from last year's team include Captain Seth Dei, Dave Horn, Don Ruff, Dwight Powell and Bill Forbes. Incidentally Dei will also be kicking field goals for the Big Red football team.

From the freshman, Coach Lace will depend on Sandy Black, Steve Orton and Jim Brown to bolster the varsity squad. The Brown team is the big one to watch this year

Schoelkopf Crescent will be the scene of exciting football.



Taking a hand-off, a Big Red player drives to hit the line.

as last year's Ivy League champs lost very few men through graduation.

Last year's football team was rated as the Ivy League "dark horse." Cornell finished the season with a 3-3-2 record in what one might call a "typical" Cornell football season.

Under Coach Tom Harp, the inventor of the famous "pyramid defense" against field goals, the football team, which had many stand-out players, could not seem to win the big games.

This year Cornell has a new head coach after Harp took the head-coaching job at Duke University. Jack Musick, a former assistant under Bob Blackman at Dartmouth, is the new mentor and will be assisted by the only man from Harp's staff who stayed at Cornell, Chuck Gottfried.

Coach Musick was the defensive strategist while at Dartmouth and should bring a new outlook to Cornell's defensive game. Fans can expect a five or six man line with two line backers and a "monster" or roving line backer. There will probably be man-to-man coverage on pass plays, quite different from last year's zone.

The offense will have many more variations, and fans can definitely expect to see an aerial attack. Offensively, Coach Musick should receive several good players from last year's freshman team as well as several returning lettermen.

Ed Zak, a sophomore halfback, is the man to watch in the backfield as well as keeping a strong eye on senior Pete Larson. Senior quarterback Bill Abel is passing well this year and is the key figure in Cornell's new aerial attack.

All in all, the fall sports season should be a highly successful one for Cornell teams with two new coaches and many promising sophomore stars.

ALUMNI

HENRY W. SIMONS, '38, 23 Moore Avenue, Binghamton, New York, is a manager for rural sales at the New York State Electric and Gas Corp. in Binghamton. A member of the Binghamton Sales and Marketing Executives Club, his son, Allan B. Simons, graduated from Cornell in 1965.



FRANK H. OSTERHOUDT, '50, Route 1, Cross Plains, Wisconsin, is a project assistant for the Water Resources Center at the University of Wisconsin. He received his M.S. from Cornell in 1963 and is presently a Ph.D. candidate at Wisconsin. From 1957 to 1961, he operated a dairy farm in Cayuga County with his brother Bob, Class of 1954.



ANTON F. TEWES, '57, 947 Lincoln Road, Detroit, Michigan, is a regional sales director for the Alexander Hamilton Life Insurance Co. He was previously with the American Cyanamid Co. and is program chairman of the Cornell Club of Michigan. He served as vice chairman for the Cornell Centennial Fund in the Detroit area.



EDWARD A. TAMM, JR., '63, 7944 Areopagitica Avenue, Bridgeport, New York, is a sales representative for the Carnation Milk Co. and is a member of the Bridgeport Jaycees. He majored in agricultural economics at Cornell.



WILLIAM A. STAEMPLI, JR., '53, (see picture) has been elected president of the National Agricultural Advertising and Marketing Association and also president of the eastern chapter. Mr. Staempli is animal health product manager for the agricultural division of Chas Pfizer & Co., Inc.



GEORGE R. JOHNSON, '39, 431 Oakland Avenue, Columbus, Ohio, is chairman of the animal science department at Ohio State University in Columbus and the Ohio Agricultural Research and Development Center in Wooster. After receiving his degree from Cornell, he went on to earn his M.S. and Ph.D. at Michigan State in 1947 and 1954. He served on the faculty at Cornell between 1943 and 1948 and is president of the midwestern section of the American Society of Animal Study.



TO THE ALUMNI: The Countryman is interested in hearing from any and all graduates of the College who would like to comment on the magazine or simply let us know what you are doing. And if you have any items of interest to alumni groups, please drop us a line.

FRED P. FOSTER, '16, 110 S. Main Street, Afton, New York, served as superintendent of schools in Chenango County School District No. 1 after receiving his M.S. in education at Cornell. Presently retired, Mr. Foster is active in the Grange, Red Cross, and enjoys studying local history and horticulture in his spare time. He is married to the former Loraine van Waganer, class of 1920.



JOHN J. WILLE, SR., '26, 150-19 61 Road, Flushing, New York, is currently with the U.S. Army Corps of Engineers in New York City. After graduating from Cornell, he earned his masters degree at New York University and then served with the City of New York and Goodbody and Company, stock analysts before assuming his present position. His son John, Jr., was graduated from Cornell in 1959.



CORRECTION: In the May issue, it was incorrectly reported that Donald M. Bay, '55, of 514 Victor Road, Macedon, New York, had been recently made a vice president of Security Trust Co. of Rochester, New York. Actually, he was made a vice president two years ago, but has since left Security Trust Co. and joined the Genesee Valley Cooperatives, Inc., as assistant general manager.



PICTURE CREDITS

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TELE-LECTURE: LONG DISTANCE LEARNING



Through the use of the telephone and pre-arranged visual aids, Cornell students in a communication arts course "attended" a planning session of magazine editors in Iowa. They listened to the editors as they discussed the planning of an issue of "Successful Farming," and at the end had the opportunity to question the editors.

Tele-lecture is a relatively new concept in communication which brings the lecturer to the audience by a long distance telephone call. Additional facilities are made available which make it possible for direct conversation between lecturer and listener.

This system represents an important step in modern-

izing communication's role in the classroom. The major advantage of tele-lecture is that it makes it possible for a greater number of students in colleges and universities to receive instruction from the best qualified men in any one field. The technique, then, improves the quality of education by exposing the maximum number of students to the best teachers.

Through the use of slides the listener is able to see the lecturer and the materials being discussed.

This dimension in education is another step forward in the improvement of undergraduate education in the New York State College of Agriculture at Cornell University.



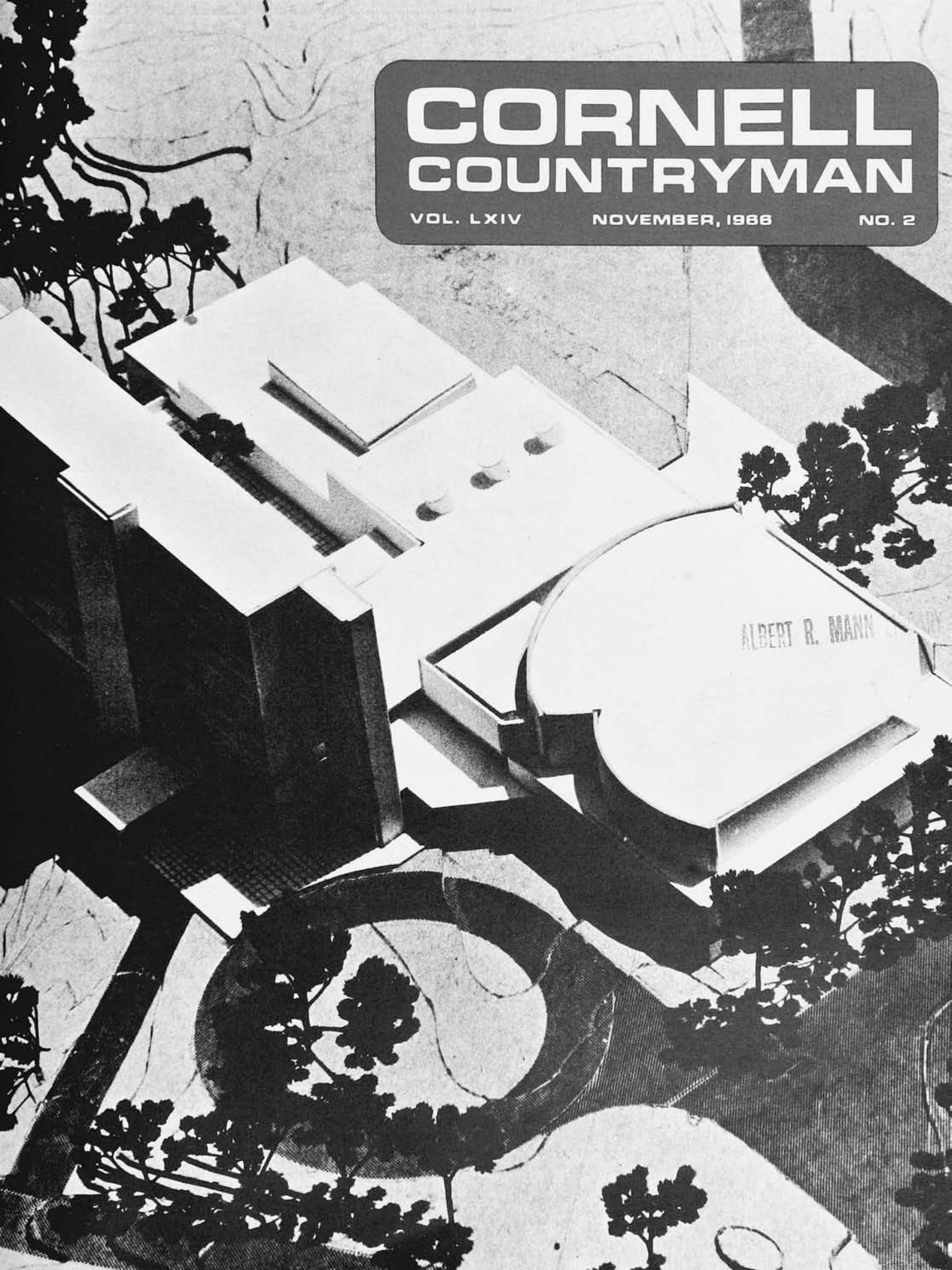
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CORNELL COUNTRYMAN

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An aerial, black and white photograph of Cornell University's campus. The image shows several large, interconnected buildings with flat roofs and geometric shapes. In the foreground, a prominent circular structure is visible, with the name "ALBERT R. MANN" inscribed on its side. The buildings are surrounded by numerous trees, their dark silhouettes contrasting with the lighter tones of the architecture. The overall composition is a high-angle, top-down view of the university's main campus area.

ALBERT R. MANN

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ON THE COVER

*An architect's rendering of a dream that
Cornellians hope comes true — a confer-
ence center for the University. (See
story on pages 8 and 9.)*

CORNELL COUNTRYMAN

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EDITOR-IN-CHIEF: Christi Merritt, '67; **MANAGING EDITOR:** Joan Solomon, '67

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Tom Sturdevant and Ngtonh Kohom discuss training center problems in a cattle shed at Oleikn Agricultural Center.



ASSIGNMENT:

SOUTH VIETNAM

by Jerryanne Taber '67

Basic assignment: help build and operate an agricultural training school for Montagnard tribesmen of Pleiku province, central highlands of South Vietnam.

Tom Sturdevant, a volunteer worker for the International Voluntary Services, viewed his task with uncertainty. He was embarking upon a two-year tour of duty for IVS in the Southeast Asian center of conflict, having just graduated from Cornell University and with only six weeks of Vietnamese language training. "I had absolutely no idea how to go about it."

Nevertheless, Sturdevant did go about it! As an agriculturist for the volunteer group after which the Peace Corps was modeled, he went on to play a key role in constructing and organizing the Pleiku Training Center.

The center's facilities were to be built by the Montagnards themselves. Consequently, simplicity and practicality were essential elements throughout the project. The final working corps consisted of 20 young Montagnard men and a middle-aged Montagnard carpenter. The first building to take shape was the warehouse. This was soon followed by a complex of four pigsties. A Montagnard loghouse, built as a dormitory for future students, was the final structure to reach completion.

Agricultural techniques are shown to students in the demonstration and practice gardens.



While construction was underway, Sturdevant and his helpers developed demonstration plots. They planted peanuts, sweet potatoes, tomatoes, cabbage, beans, carrots, corn, onions, and radishes. The group set up fertilizer demonstrations and dug and stocked a fish pond.

Once the center was ready to receive its first class, Sturdevant met with the provincial Chief of Agriculture and the Chief of Animal Husbandry to devise a 12-day course of study. The resulting curriculum included instruction in agriculture, animal husbandry, health, first aid, brickmaking, and fish pond management. Since the center's official opening in March 1965, some 320 Montagnard farmers have completed the course.

To regard the Pleiku Training Center in South Vietnam as a revolutionary factor in Montagnard agriculture would be an illusion. But for Tom Sturdevant and others like him, this product of the IVS serves an essential purpose. It has provided some individuals with ideas, motivation and encouragement to become better farmers.

The "real challenge," according to Sturdevant, lies in developing local people, teaching them skills. "We teach them the importance of helping their fellow villagers. They are taught to become agents of change, agents who will survive and affect the Vietnamese countryside long after we Americans have departed."

Apparently two years were not enough to quench Sturdevant's enthusiasm for work in international service. He is now serving in Pleiku as assistant province representative for refugees as part of another two-year term under the Agency for International Development.

In fact, war torn Vietnam is a growing focus of agricultural development endeavors similar to the Pleiku project. Two New York State Agricultural Agents are presently serving in the capacity of Farm Advisers in that country at the request of the United States government for volunteers for such positions. William Schumacher of Greene County, a 1949 graduate of Cornell, and Robert Dodd of Montgomery County are adding their energies and abilities to the expanding pool of resources for agricultural development in Vietnam.



FARMING THE SEAS

by Robert Selle '70



With world population explosions erupting at tremendous rates, the dilemma of adequate food supply becomes ever more insistent. Among the most practical of ideas advanced for the feeding of earth's increasing hordes is that of aquaculture.

Man has learned to farm the land to advantage, whipping it, nursing its sores, improving it, just as a promising slave. But the land is but a quarter of the Earth and but a fraction of that is tillable. The sea, however, is a giant prone at man's feet, asking his wish and ready to do his will. The fruitfulness of the sea shames that of the best land. The sea may be plowed to a depth of several hundred feet, but look at the paltry thinness of the land. The variety and cheapness of food from the sea is also of extreme interest. Let us look closer at this most interesting creature.

The sea offers many possibilities for food, though man has much yet to do before he may reap this crop. Man's relation to the sea now is what it was to the land 5000 years ago. Then, with the land, as now, with the sea, he hunted and led a planetary life, following game instead of gathering it to him and domesticating it. He lopped the top from the ecological pyramid instead of attacking the more productive foundation. It has been estimated that a thousand pounds of phytoplankton is wasted down to a single pound of food fish. Thus 999 pounds of good food is lost through energy requirements. Man has accomplished much with the land, bringing plant and animal to himself, rather than hunting it down. Why not do the same with the sea, where so much more can be accomplished?

This is not as difficult as it sounds. Wire enclosures can easily be made close to the shore where fish are secluded from their predators and where a trawler need not comb half the ocean for them. The animals may be fed directly like farm livestock, or fertilizers may be added to the water to encourage natural food organisms. Brackish-water areas are of especial value to such fish-farms. They are fed by mineral-laden water from the land, and provide a very suitable abode for a wide variety of fish and shellfish.

Fish may also be imported to the farm from all over the world. The young fry of mullet and whitefish have been transplanted from the open sea to an inshore enclosure. A Danish experimenter transferred young plaice from the coast of Holland to the Dogger Bank in the

North Sea. It seems that there was a population explosion of plaice in the Holland coastal waters and there was a limited food supply. Plaice shipped to the Dogger Bank, where large families were not the vogue, grew to three times the size of their brothers on the Holland coast. As a result of this experiment, striped bass, shad, and soft-shell clams have been transplanted from the North American east coast to the Pacific. The North American Chinook salmon has had roots made for it in New Zealand, as well.

But much the same problems arise in aquaculture as in agriculture. For instance, there are weeds such as starfish and other invertebrates. These provide a most pointed headache for the farmer by decreasing the available food supply to as low as one or two percent. On a theoretical basis, they may be eliminated by mechanical weeders or chemical weed-killers.

Another problem is fertilization of large tracts of open sea. The ingenious solution to this would be to tap the huge mineral-water reserves in the abyss of the ocean. Artificial upwellings could be engineered. Plankton on the surface would then thrive with the added minerals, and the concentration of fish would rise.

But what about farming the plankton itself, to detour around the "energy furnace" between plankton and fish? For one, the plankton would have to be concentrated to avoid straining a million tons of sea water for one ton of plankton (which is the average ratio at present). The edible and nutritive plankton would have to be winnowed from plankton otherwise endowed. The varieties of good plankton might then be enclosed, bred and improved, following much the same path as Mexican maize to plump Iowa corn.

So you see, much remains to be accomplished in the field of aquaculture. The farmers who turn its fluid sod will not go unrewarded.



Editor's Note: During the week of September 12, both the Senate and the House of Representatives passed versions of H. R. 16559 authorizing the establishment and operation of sea-grant colleges and programs. This legislation will provide grants to colleges and universities for research and education in oceanography and marine environment. Funds will be administered through the National Science Foundation.

THE DEAN'S HAT

by Maria Melnyk '68



"Since you have stepped into the Director's shoes, it is fitting that you should also wear the Director's hat." With these words, Isaac P. Roberts, retiring Dean of the College of Agriculture, welcomed the new Dean, Liberty Hyde Bailey . . . and started the tradition of "The Dean's Hat!"

Through the years, this silk "topper" has perched on the head of each Dean of the College of Agriculture on his inauguration. At this moment it lies locked in a vault in Roberts Hall, carefully preserved so that it "may be transmitted legally and lawfully from Director to Director" to keep tradition "alive through the coming centuries." This is what Roberts stipulated, although jokingly—for the hat did begin as a joke.

The story of "The Dean's Hat" goes way back to 1874, to Robert's first few days at Cornell. Roberts had arrived from the Iowa Agricultural College and he was surprised to see his colleagues at Cornell customarily dressed in frock coats and silk hats. Such formality had never existed back in Iowa. To join in the academic spirit, he splurged on a tall, black, silk "topper." But he didn't really like it and only wore it a few times.

The hat then disappeared from the scene until 1903. At that time, Roberts retired from his position, selling his carriage to the new Dean, Bailey. As he was clearing his house, Roberts discovered his old hat. As a joke, he passed it on to Bailey to represent the transfer of authority and the change in college spirit. When Bailey retired in 1915, he dutifully passed it on to his successor, Beverly T. Galloway. In a letter to Galloway Bailey wrote, "Custom hath ordained that when the Director changes his shoes he also changes his hat." And so, with due ceremony, the hat passed from the head of one Dean to another. It was handed from Galloway to Albert R. Mann, from Mann to Carl E. Ladd, from Ladd to William I. Myers, and finally today it rests with Dean Charles E. Palm.

To Dean Palm, the significance of the hat lies in its representation of the change in college spirit. When Roberts arrived at Cornell as a Professor of Agriculture he felt alienated from the academic circles at the University, and, as Myers later wrote, he bought the hat to compete "in sartorial elegance" with the other professors. But he realized he didn't need it. Then Bailey arrived, sporting a cowboy hat. Together, the two professors smashed the traditions of formal clothes and initiated the new spirit of unconventionality. In this way, Dean Palm explains, the passing of the elegant silk hat, which the Deans did not need, demonstrates that Agriculture can "stand on its own feet," and can "carry itself."

Other Deans have assigned various meanings to their hat. "The Dean's Hat," they claimed, marks the distance the college has come, keeps history and tradition alive, and protects the area where ideas are "presumed to generate." Also, Myers wrote, it suggests the Dean "should keep his feet on the ground and his head high enough in the air so that he can look into the future," and he should not become "high hat."

The tradition of this tall "topper" is taken lightly. It is still a joke. Nevertheless, the Deans have felt the hat should be seen more by the public. Galloway suggested that the Dean should "adorn himself" with the hat at least once a year. The thorn in this idea was that the hat didn't fit the Deans. As Bailey wrote, it was "much too small ever to content itself on my caput." Dean Palm suggests the hat be displayed in Mann Library, giving students and other curious people an opportunity to see "The Dean's Hat."

Even locked in its vault, the "topper" does its duty. This hat, Dean Palm wrote, will serve as an inspiration and reminder of the great privilege and trust that have been given to me." And it may serve as such an inspiration for many future Deans of the College of Agriculture, "for Directors may come and Directors may go, but the hat stays on forever."



Dean Charles E. Palm smiles as he proudly accepts the traditional hat from retiring Dean William I. Myers.

URBAN SPRAWL:

EVERYONE'S ENEMY

by Earl Conti '67

New York State Governor Nelson A. Rockefeller calls urban sprawl, "The enemy of rural people as well as the urban population." He attributes the destruction and misuse of much valuable New York State agricultural land to this phenomenon. The Governor goes on, "Urban sprawl and its effects on land, people and economics is proving to be a most perplexing problem in New York State. Good farm land is one of New York's most valuable resources. When this land evaporates under urban pressures, something must be done."

To combat this, Governor Rockefeller has appointed a 15 member commission to study the unrestrained growth problem. Originated on July 7, 1966, *The New York State Commission on Preservation of Agriculture Land* will have as its chairman Russell R. Billings of Hamburg, New York. President of the Stanford Seed Co. of Buffalo and chairman of the New York State Agricultural Businessmen's Council, Billings is more than aware of the problem at hand. He announced in late July that the new commission would begin its investigation of land-use patterns in the state immediately.

The basic plan is to divide the State into ten regions, focusing first on Nassau and Suffolk counties for they have the fastest growth rates and thus the most immediate problems. Planning work has also been started in the Lake Champlain, Lake George region with more groundwork being started for all other areas in the State. New York is the first State in the Union to undertake a comprehensive state-wide plan for growth and development such as this. A federal grant of \$1.5 million to help finance this planning has been applied for. According to Mr. Billings, the Commission plans to make recommendations to Governor Rockefeller later this year. It is expected that the Governor will ask for some legislative

action based on the Commission's work by early in 1967.

Commission members, chosen from every region of the state, represent a wide range of interests. They will study such questions as, how can developers be persuaded to use land closer to cities before spreading to prime farmland? Can urban boundaries be expanded in an orderly fashion rather than "leap-frogging" into open land?

"We intend," said Mr. Billings, "to find out how the State can best use its agricultural land as a valuable resource, and, at the same time, preserve it as a heritage for future generations and as a critical element in the quality of our environment. We can't afford to allow spreading urbanization to continue swallowing nearly 20,000 acres of irreplaceable croplands every year."

Work began with the Commission's first full meeting August 31, 1966 at Cornell University in Ithaca, New York. Initial activities will include identifying good farmland, devising classification schemes, and mapping urban zones.

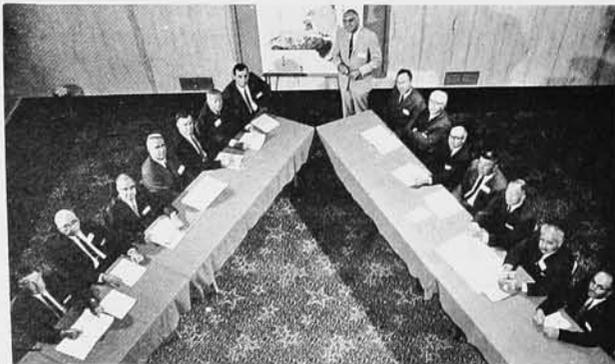
About 2.2 million acres are in urban use now, and New York's population is almost 18 million. A population of 30 million is anticipated by the year 2000. Land economists predict that urban demands could be satisfied by only 1.7 million more acres . . . but only if this land is used wisely. If it is not used wisely and disorderly development were permitted to continue, the figure might reach 3 million acres!

In its studies, the Commission will require the cooperation of many agencies, institutions, and organizations in the State. It will call upon the people of New York State for their understanding and cooperation. The conflicts, incompatibilities, and economic and aesthetic loss created by urban sprawl can only grow greater in the future unless a united effort is undertaken now.

Governor Rockefeller summed it up by saying, "New York still has an opportunity to shape its progress, to protect its landscape and to make growth serve rather than dominate its people . . . I shall look to this Commission for a major contribution toward achieving these goals."



Commission on Preservation of Agriculture Land: Russell R. Billings (standing), chairman. Members are (from left) Allen H. Ostrander, Bertram J. Miner, Winfield D. Tyler, Max Shaul, Robert V. Call Jr., Warren A. Ranny, Thomas L. Todd, Billings, Gordon Conklin, Donald Green, C. Powers Taylor, John Talmage, Frank Walkley, John G. Leary, George B. Humphreys.



Gordon McKusick, Runner

by Corydon I. Byard '66
and
Dan Pritchard '70



At Van Courtland Park, he ran into the big time by winning the ICAAAA Freshman Cross Country Championship, beating runners from Michigan State, Notre Dame, and a four minute four second mile star from Villanova. He also set a new course record covering the same ground Olympian Vic Zwolak had run on four years before.

In track, Gordon continues to amaze even the coach, Glenn Davis, two-time Olympic Champion. Says Davis, "Gordon is great. We're lucky to have him running for us." Just how fast Gordon can go, we don't know. Some of Gordon's teammates think he is as good as some of the much-publicized West Coast youngsters like Mike Ryan and Olympian Gary Lungrin.

The only real competition he has had in track so far was in the ICAAAA Indoor Track Championships at Madison Square Garden in New York City. Gordon ran the anchor leg in the freshman distance medley relay. He grabbed the relay baton seven yards behind the same Villanova runner he beat in the ICAAAA Cross Country race, passed him and sprinted to the finish tape thirty yards ahead. His time was four minutes and twelve seconds, only two seconds off the all-time Cornell mark.

What has Gordon to say for himself? "I've got to make up for my lack of coordination," he explains. "And one must stay in shape." Gordon likes running, especially being on a team and traveling to track meets all over the Northeast.

In addition to his sports activities, Gordon sings in the Cornell Glee Club, is pledged to the Sigma Pi Fraternity, and maintains a B average in the College of Arts and Sciences. How does he have time for everything? "It's there if you use it," he explains.

This year Gordon will run the indoor two mile and occasionally the mile, depending on where and when he's needed and on who the competition is. He is certainly well thought of by his family, coach, and teammates. Coach Davis comments, "This boy is all athlete."

Gordon McKusick is a runner full of vitality and a thirst for victory. As a freshman last year he compiled an enviable record, one Cornell proudly displays in its record books. Last year, Gordon proved to be one of the best runners Cornell has ever had, and the fastest freshman cross country runner in the Northeast.

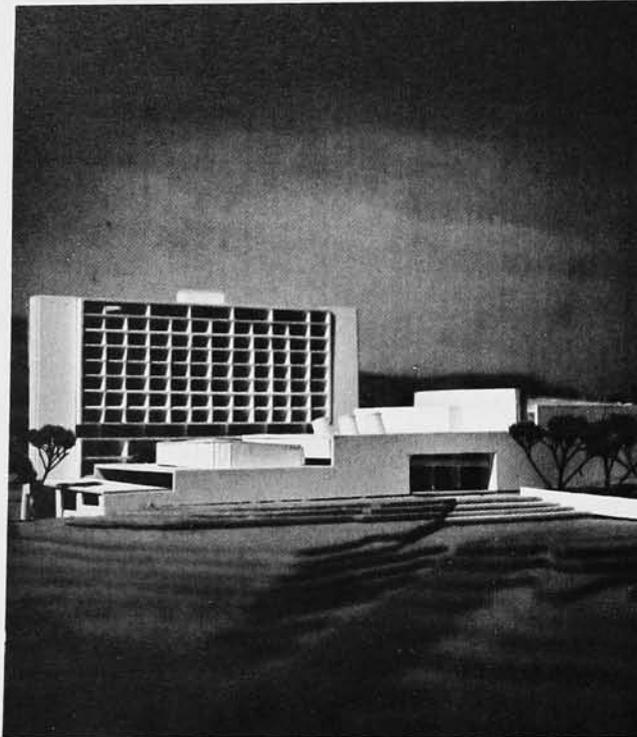
Gordon didn't become great overnight. He has spent many years developing and has had a lot of help from his family. Gordon isn't a natural runner with thin legs and arms and enormous lungs. He is a six-footer with dark hair, warm blue eyes, and a friendly smile.

When he was fourteen, Gordon dreamed of being a basketball player and decided to join the Eastridge High School freshman team in his hometown, Rochester, New York. His dad, who had competed in cross country as a youth, encouraged Gordon to practice running to get in shape for basketball. Gordon ran well in cross country because there were markers along the course telling him where to run. All he had to do was run fast. In basketball Gordon remembers that he was fast enough, but never seemed to run the right way at the right time. He always managed to throw the ball away. "I have this problem with coordination," explains Gordon. "I don't have much."

Gordon soon gave up his basketball aspirations and since then has devoted himself to running. Carl, his older brother, led Gordon and Eastridge to many cross country victories. Now Lee, the youngest McKusick, is a sophomore at Eastridge and won the County Freshman Cross Country Race last year. "We all get involved in running," explains Mrs. McKusick. Even Gordon's older sister, Dlaran, follows Gordon's career closely, always advising him to "go for time every time."

Gordon has been amazing people and breaking records ever since he came to Cornell. He was undefeated in all his cross country races last fall. He set new course records at Syracuse, Buffalo, Cornell, and Van Courtland Park in New York City. At Cornell, he set two new time records. In the outdoor two mile, he set the Freshman record of 9:02.8, and in the indoor two mile he set the freshman record of 9:10.2. On every course he ran he left his own course record.

PROPOSED CONFERENCE CENTER

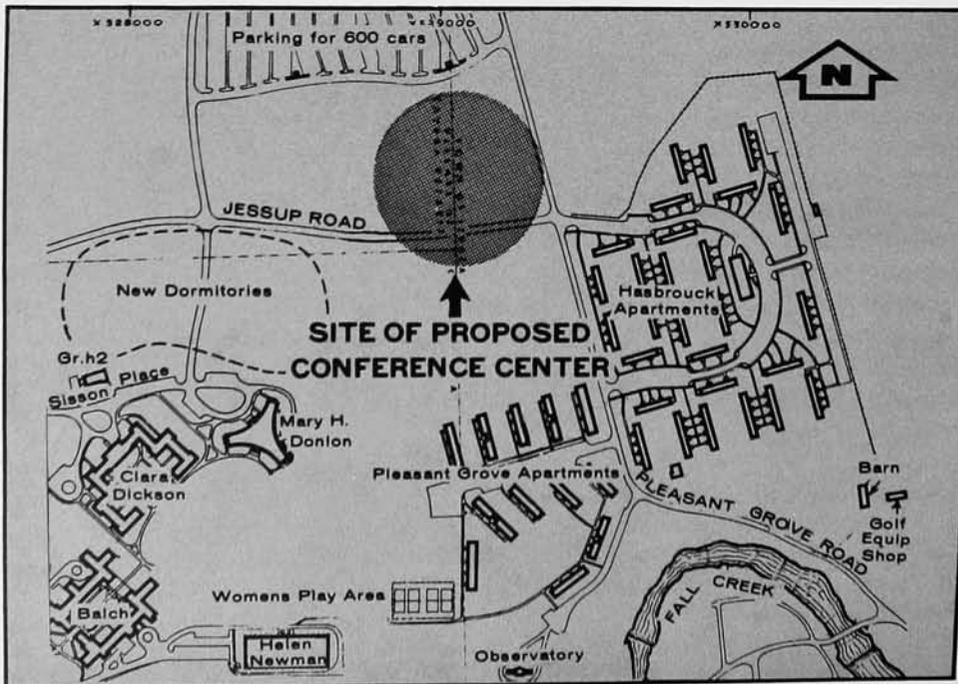


Each year Cornell University hosts an increasing number of training institutes, conferences, and short courses. These range in size from a few participants to thousands; some meet for a day, others for several weeks.

Last year, 204 conferences were held here, with a total attendance of nearly 30,000. Though the present facilities are suitable for small groups, they are inadequate for the demands of larger groups. Cornell recognizes the need for a facility specifically designed to meet these requirements, and the one shown here represents the type it would like to be able to provide in the future. Charles E. Palm, Dean of the College of Agriculture, and Thomas W. Mackesey, Vice-Provost, and their associates have been working on the project.

The building shown here is illustrative of the type and size of facility necessary to meet the demands of the present and of the years ahead. It would be centrally located at the northern edge of the campus on Jessup Road, near the present and proposed dormitories, and adjacent parking lot. Discussion is now under way with University and public authorities for the extension and

Upper Left: Exterior view of proposed facilities. Lower Left: Site plan.



TEWAY TO CONTINUING SERVICE

relocation of Jessup Road to provide an easier access to Routes 366 and 13.

The building, as designed, would have two major components: Meeting rooms with their associated facilities, and living quarters for those attending the conferences. The center itself is organized around a main concourse overlooking a courtyard. The 20 meeting rooms would accommodate from 20 to 100 persons each. Lounges, exhibition areas, a reference library, an audio-visual preparation area, and a reproduction and duplication space would be associated with the meeting rooms.

The auditorium would be equipped with simultaneous multiple translation facilities for international groups. The assembly room would seat 1000 persons and be used for special occasions and banquets as well. In addition, this space, including the stage, could be divided by a retractable wall to accommodate two groups of 400 and 600.

Living quarters would be separate but within easy access of the meeting areas. One hundred guest rooms would be provided, and the nearby dormitories would be available for additional housing during the summer. Com-

plete kitchen and dining facilities would be provided for the convenience of the guests.

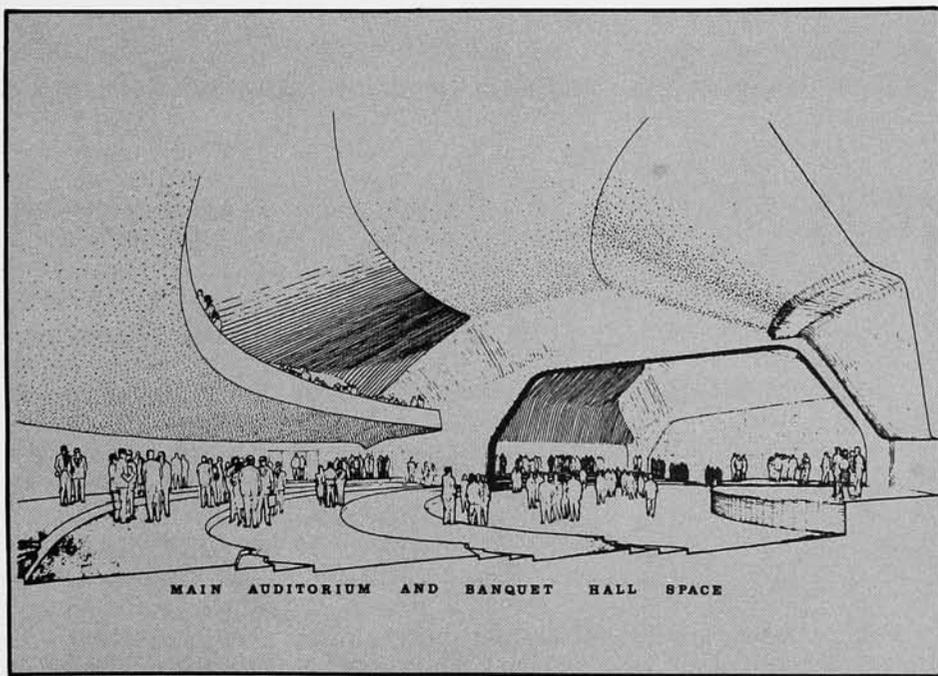
The proposed conference facilities are estimated at 125,000 square feet. The total capital cost, including furnishings, landscaping, utilities extension, architects fees, etc., is estimated at \$5,000,000.

In proposing this new facility, Cornell University has again recognized the obligation to share its resources with responsible groups beyond the campus boundaries not only now but in the future. To quote James A. Perkins, president of the university, in his Stafford Little Lecture Series at Princeton University:

“... the university’s decisive role leads not to isolation but to leadership, not to autonomy but rather to participation in all levels of academic organization... those who work in the university must increasingly conduct themselves as members of a larger community and as participants in activities at all levels of the system.

If the proposed conference center becomes a reality, it would go a long way toward helping Cornell more adequately fulfill its public service role.

for conference center site. Center: Proposed lay-out for maximum efficiency. Right: Main auditorium and banquet hall space.



The Million Dollar Potential

by Marya Dalrymple '70 and Dan Pritchard '70



"Last year's agricultural students, for the first time, reached the million dollar level in scholarships," according to Associate Dean W. Keith Kennedy.

Speaking before a record crowd of 900 scholarship-winners, honored guests, faculty and freshmen at the Twentieth Annual Ho-Nun-De-Kah Barbecue on October 10, Dean Kennedy reviewed the scholarships for 1965-66. "Students in the College of Agriculture received more than one-fourth million dollars from Agricultural and Cornell University scholarships; one-third million dollars from State scholarships and more than \$400,000 from scholar incentive and educational assistant programs."

This year for the first time, the College of Agriculture was awarded: a \$500 scholarship provided by the Gerber Baby Foods Fund; a \$500 W. S. Middaugh-Alpha Zeta Memorial Scholarship; a \$300 Borden Scholarship in Food Distribution; a \$150 scholarship from the Burton A. Jennings Memorial Fund; and a \$125 New York Florists Club Award in Floriculture.

A number of students were lauded for superior academic performance. Mary Caroline Cole was awarded this year's Alpha Zeta Key for her 4.10 grade point average, the highest in her freshman class. More than half of Mary's grades were A+ and her courses included two Sophomore courses in Calculus. The Alumni Association of the College of Agriculture gave an award to Neil Hartman, who held, at the end of his first two years, the highest scholastic average of 3.99.

To the senior achieving the highest cumulative average for three years, Evelyn Judith Schwartz with a 4.12, the Alumni Association presented the Borden Agricultural Scholarship of \$300. Robert M. Goodman, a transfer from John Hopkins University and the recipient of the Louis Ware Scholarship of \$1,000 from the International Minerals Corporation, was recognized for his outstanding academic average of 4.08.

Talented Big Red quarterback, William Abel, was lauded for his academic as well as his athletic prowess.

Bill received the Borden Scholarship and the Jewel Foundation Scholarship for the top student in the food distribution program.

Over 400 other University and New York State Scholarship holders were also honored in the program.

Dean Charles E. Palm, the principal speaker, addressed his remarks especially to the student sector. Speaking of the potential of agriculture in our modern society, he emphasized that agriculture's vital role is skyrocketing.

"As students, you can be proud of joining modern agriculture's great team," Dean Palm said. "The world's most efficient agriculture and the envy of so many nations is built on teamwork — with partners who work together to provide the input requirements for production, the commercial farm business that produces the raw products and the allied businesses that take these products through processing, marketing, and distribution to consumers."

To meet the increasing demands of agriculture, the College is expanding and strengthening its present resident teaching, research, and extension programs here in New York State. A special program in the Rural Social Sciences has been developed by Cornell professors and supported by the Ford Foundation as an important part of the overall Cornell University grant for area studies.

Increased attention is being placed upon the needs of international agriculture, the Dean continued. More than 300 students — roughly a third of all international students from 80 countries studying at Cornell — are in the undergraduate, graduate and special programs of the College of Agriculture. Through invitation of the University of the Philippines, and with support from the Ford and Rockefeller Foundations, the College has renewed a cooperative graduate education program with the University of the Philippines College of Agriculture.

"I would also stress the importance of striving for excellence in your studies," Dean Palm concluded. "We believe you have the million-dollar potential or you would not be here."

University Life

South of The Border

by Emily Miller '69



Grant Mayne, exchange student in Argentina, astride a horse in front of an Argentine palace.

Grant Mayne wanted "to step outside of the United States and see what the rest of the world was doing." And that is exactly what he did. Currently a senior, pre-veterinary student in the College of Agriculture, Grant spent last year as the College's exchange student to Argentina.

Since the Argentine academic year begins in August, Grant left for his new university (The University of Buenos Aires, Faculty of Agronomy and Veterinary), late in June. Despite a troublesome mist over the city, and customs confusion, Grant arrived safely, happy that Wayne Pulver, the previous exchange student, awaited him at the airport.

Grant's new lodging, the "pension," was conveniently located across the street from the university. This was a rare and enviable situation, for most of the students lived in near-by cities and had to commute daily. The "pension" was a boarding house, although far less expensive than those available in the States.

For Grant, studying in Argentina was a rewarding experience. The students received him well — curiously and eagerly. The Argentine students, Grant explained, "are more inquisitive; they ask and challenge."

Argentina's universities, or facultads, charge no tuition, for the federal government supports them. Therefore, the schools have devised a "pre-college curriculum" which the student must follow and pass. In a letter to Professor John P. Hertel, Secretary of the College of Agriculture, Grant wrote that these "tactics employed . . . are . . . more cogent in the realization of one's shortcomings than an SAT or College Board Examination score."

Once admitted to the university, the students pursue a schedule which ideally lasts five years. But they are permitted to go along at their own pace. Students often include semesters for an outside job or contemplation of educational goals.

Although the allowance for individual rates of study means that there is not an elaborate commencement each year, the students do not forego the festivities of graduation. As Grant described in his letter: "Once they have finished their courses and given a final talk on their

special field of interest, each one is rounded up by a band of their "friends." He is then shackled and tied to a stout pine tree (not to prevent his escape, of course, for each gives his whole-hearted consent — after a bit of applied persuasion), stripped down to a few rags, and painted, glued, and tarred . . . the thing is dropped off on some street corner in the more fashionable part of town, preferably in front of several horrified elderly ladies."

But Grant did much more in Argentina than study and observe the study habits of the Argentine students. When December's oral examinations were over, Grant and a companion headed for the hills. They drove southward from Buenos Aires — visiting Mar de Plata, Miramar, and Monte Hermosa. Then "like all young men should do, they went west," from the Provincia de Buenos Aires to the Andes and Bariloche, a scenic wonderland.

Although this vacation may seem a bit extraordinary to the Cornell student, Grant said that it is typical for the Argentine student who is not accustomed to working during his vacations. There are not enough jobs for all the students.

Grant was the fourth student in the Argentine Exchange Program. Although the individual student must pay for his round-trip transportation, a scholarship provided by various student organizations pays for food, board, and extra expenses.

An interviewing committee of 15 faculty members, students, Professor Hertel, and Mr. Williams selected Grant for this honor during the spring semester of his freshman year. Twelve tentative candidates, chosen on the basis of written applications, were interviewed. They were asked such questions as, "What are the five major agricultural products of the United States?"

Being selected as a freshman allowed Grant time to take a year of Spanish and make other preparations for his trip. But his major preparation for the exchange was Grant's desire "to step outside of the United States and see what the rest of the world is doing."

COUNTRYMAN INTERVIEW

This month's interview was conducted by Alexis Tan, visiting instructor from the University of the Philippines in the Department of Communication Arts. He spoke with Dr. Dioscoro L. Umali, dean of the Philippines College of Agriculture.

About 10,000 miles from Cornell, across two oceans and three continents, lies an agricultural college whose wooded lanes, deep gorges and swiftly running brooks are strikingly reminiscent of the Ithaca campus. And the similarity does not end there: even now, Cornell professors and graduate students are teaching and studying in its fields, classrooms and laboratories.

The campus across the oceans is the University of the Philippines College of Agriculture, a "sister" college of the N.Y. State College of Agriculture at Cornell by virtue of a joint Graduate Education Program implemented three years ago. The program provides for an exchange of faculty and graduate students between the two institutions. Under the leadership of its dean, Dr. Dioscoro L. Umali, the Philippine college is fast becoming Asia's center for research and education in the agricultural sciences.

Dean Umali came to Cornell the latter part of Sep-

The gates to the University of the Philippines college of Agriculture.



tember to discuss the Graduate Education Program with Dean Charles E. Palm and other officials of the College of Agriculture. No stranger to the Ithaca campus, Dean Umali received his Ph.D. in plant breeding from Cornell in 1949. In addition to being Dean of Agriculture, he is now vice-president for agricultural and forestry affairs at the University of the Philippines and an undersecretary of agriculture for the Philippine government. A few days before coming to Cornell, he was in Washington with Philippine President Ferdinand Marcos for talks with President Johnson and other officials.

In an interview with the Countryman, Dean Umali talked candidly on U.S.-Philippine relations, student demonstrations in the Philippines, the socio-economic situation in Southeast Asia, and other topics of interest to the American college student looking forward to a foreign assignment. Here we bring you the views he expressed in that interview. □ □ □

U.S.-Philippine relations: The Philippines remains a staunch supporter of the U.S. in Southeast Asia. However, the relationships between the countries can still be improved. This was a major objective of the recent Philippine delegation to Washington. As a result of that conference, the lease of U.S. naval bases in the Philippines has been reduced from 95 to 25 years. In the same conference, President Marcos reiterated his support of U.S. policy in Vietnam. □ □ □

U.S. aid to the Philippines: President Johnson has committed 46-million pesos for the agricultural development of the Philippines. The grant will be used for the development of our water resources — irrigation systems, flood control, drainage — which are vital to increased agricultural production in the country. □ □ □

The U.P.-Cornell Graduate Education Program: This is one of the best working cooperative international programs anywhere in the world. It provides Cornell graduate students with excellent orientation and training opportunities for foreign assignments. The advanced training Filipino students get in Cornell helps solve the human resource problem of the country.

Like most other American university contracts in foreign countries, the U.P.-Cornell Program enjoys strong universal appeal because it involves the education of people. This type of assistance has the least likelihood of

being misunderstood as political or economic domination by the assisting country. To developing countries that have just acquired their independence, this is very important, as they are keenly sensitive to political or economic interference from any foreign nation.

In addition, the U.P.-Cornell Program has been extremely successful because it uses the team approach. Cornell scientists from the physical, biological, animal, socio-economic and communication fields have been working cooperatively for the last three years with their Filipino counterparts. This intra-disciplinary team is able to look at our institutional and national problems as one whole to which a concerted effort could produce the desired solutions.

Student demonstrations: Students are demonstrating everywhere in the world today, and for innumerable causes. This is a healthy sign, provided it is kept within the bounds of the law. We have always given the students permission to demonstrate at our college, provided they do so peacefully, and provided they do not interfere with the proper functioning of the college. Academic freedom should not only be enjoyed by the faculty. However, we don't believe in civil disobedience. We have in our college a 'Freedom Park' where any student can speak his mind on any subject with complete immunity. We have picked up a lot of good ideas from their speeches. It pays sometimes for students to criticize the activities of the college. This makes the faculty more careful and responsible, particularly in their teaching activities.

The socio-economic situation in SE Asia: The pressing problem in many Asian countries is not really a conflict of ideologies but the growing disparity between the rich

Dean Umali (right) is briefed on his Cornell itinerary by Dr. Turk (center) and Dean Palm (left).



President Carlos P. Romulo of the University of the Philippines and President James A. Perkins of Cornell sign the agreement for the Philippine-Cornell Graduate Education Program in Manila.

and the poor. The great bulk who are poor are getting poorer and the few who are rich are getting richer. Most political instabilities and upheavals stem from such economic causes.

International opportunities for American students: We need more trained people to help in agricultural development. This is one area where American students and scientists can do the most to help solve the world food problem. However, the American student desiring a foreign assignment should first learn and understand the cultural pattern, economic and political situations, and aspirations of the people with whom he will be working. Conditions in highly developed countries like the U.S. differ widely from conditions in Asia.

Working on a foreign assignment: The best way for the local people to learn, develop and mature is to let them do things themselves. They will make mistakes, but this is the most effective way they will learn. The foreign specialist should not make himself indispensable; instead, he should work himself out of the job.

Cornell and the University of the Philippines: Our college and Cornell, through the joint program, are helping develop the human resources of Southeast Asia in the agricultural sciences. Hundreds of students from other Asian countries are applying each year for admission to our college. Last year we had to turn down almost 300 applications. We hope we will one day be able to accommodate all of them. This will go a long way in solving the region's food problems.

COUNTRYMAN CAPSULES

The demand for agricultural engineers in the United States is increasing each year, reports a leading agricultural engineer.

Prof. O. C. French, head of the agricultural engineering department, at Cornell University, said "there are easily five or six times as many positions available as there are potential applicants." During the past two or three years, the number of "positions available" outnumbered the "positions wanted" by nearly four to one, he noted. French said an increasing number of agricultural engineers is in demand in water resources development and efficient use, water quality control, and rural area development and planning.

"Food production with less human energy is a pressing problem throughout the world. Agricultural engineering is an essential segment of the scientific training required to cope with this vital problem," French said.



The **Guldin Awards** are presented semi-annually to those individuals who displayed excellence in writing. The following *Countryman* writers were winners in the fall semester of 1965. First Place, Jerryanne Taber, '67, "Electronic Turkey Tracking;" second place, John Short, '67, "Agriculture in the Jungle;" third place, Joan Solomon, "Genes and Behavior."

Those receiving honorable mention were Charles Wilson, '69, "After the Chestnut Blight - A Revival?" Andrew Batty, '69, and Charles Wilson, '69, "Cornell in Southern Asia;" and Barbara Fitzpatrick, '67, "Brazil Project."



A **Norwegian professor** has been appointed to the staff of the rural sociology department, New York State College of Agriculture, Cornell University.

Prof. Od Grande, head of the division for rural sociology at the Agricultural College of Norway, will act as a visiting professor at Cornell. He will conduct research on farm organizations in this country and attempt to establish a basis for comparative studies in Norway and other European countries.

Grande received his M.S. degree at Cornell in 1955. He has been an advisor for the United Nations development program in Afghanistan and for a year was a member of a U.N. technical assistance mission to that country.

Are housewives sensitive to the quality and prices of eggs? Of course they are, but they also value the aesthetic appeal of the carton.

Prof. Lawrence B. Darrah, agricultural economist, New York State College of Agriculture, Cornell, reports that in a test of four different colors (white, yellow, pink, and aqua) the choice of the shoppers fell on aqua. The new carton is made of polystyrene-foam and proved to be as good as the standard chipboard and molded-pulp containers.



After many years of study, Cornell University scientists have found means of destroying certain species of harmful fungi.

Prof. Martin Alexander, New York State College of Agriculture, Cornell, says the method may unlock the door for biological control of some species of fungi.

Alexander, a soil microbiologist, explained that eradication of the fungi was accomplished by giving microbes food on which they can thrive and grow in numbers. By feeding bacteria a variety of synthetic and natural materials, the food supply boosted the population of bacteria stimulating the killing of fungi.



Frederick J. Jannett, '67, won first place in the Eastman Stage in Public Speaking this Spring for his remarks on "Narrow Minded Conservative Republicans." "The Real Farm Problem," won second place for Paul J. Foster, '66. Prizes were \$100 and \$25 for first two places. Others in this fifty-fifth annual competition, and their topics, were: Jerryanne Taber, '67, "Know Your Objective;" Seth K. Dei, '67, "The African Student Abroad;" Richard D. Jones, '69, "Agriculture's Public Image;" and Judith B. Harvey, '66, "Only a Song - Only a Flag." The alternate in this contest was Russ E. Kaegebein, '67.



Competing for 1966 Eastman State prizes (seated 1 to r): Jerryanne Taber, '67; Richard D. Jones, '69; Judith B. Harvey, '66. (Standing, 1 to r): Frederick J. Jannett, '67; Russ E. Kaege-

ALUMNI

GUITTA D. BLAU, '47, 356 Maynard Dr., Buffalo, New York, is a teacher at St. John's Nursery School. She was a chemist for the Bjorksten Research Lab in Madison, Wisconsin and a teacher at the Trailer Camp Nursery School at the University of Wisconsin. She enjoys bird watching and has become an enthusiastic skier.

LT. MARC L. BORNN, '62, (home address) 412 Avenue L., Brooklyn, New York, is currently flying combat duty in Viet Nam. Writes his mother: "He has seen *almost* every part of this world, while in the Air Force." He was in the Jump and Parachute Club while at Cornell.

ELIZABETH K. BENNETT, '62, 123 Chinaberry Court, San Antonio, Texas is presently teaching English in a high school. She attended Hofstra University after graduation from Cornell and was Editorial Assistant at the Sperry Gyroscope Company. Her husband is Lt. Roger Bennett stationed at Fort Sam Houston, San Antonio.

NORMAN R. SAWYER, '39, 360 First Ave., New York, New York, is a broker for the Industrial Diamonds Company. He attended Brooklyn College and Columbia University after graduation from Cornell. He is in the Cornell Alumni Association. He has worked for Nation Dairy Products Corp. and the Hygrade Food Prod. Corp.



Dr. Armando Samper addressing a conference on Latin America rural development held in Cornell last November.

RICHARD W. BOERS, '63, 618 Michigan St., Toledo, Ohio, is now taking courses at the University of Toledo. He is a landscape architect for the city of Toledo, Parks Division. He is in the American Society of Landscape Architects and the Ohio Association of Land Architects.

RAPHAEL L. BELLINGER, '37, Woodside Drive, Watertown, New York, is District Agent for Farm Family Insurance Companies. He is treasurer for the Jefferson county Extension Service Association and Chairman of the Board of Trustees, First Methodist Church, Watertown, New York.

MAURICE C. BOND, '28, 607 Mitchell St., Ithaca, New York, received his Ph.D. from Cornell in 1928. He worked in the department of Agricultural Economics from 1928-1954 and Director of Extension Teaching 1954-1962. He is a member of the Boy Scout Council.

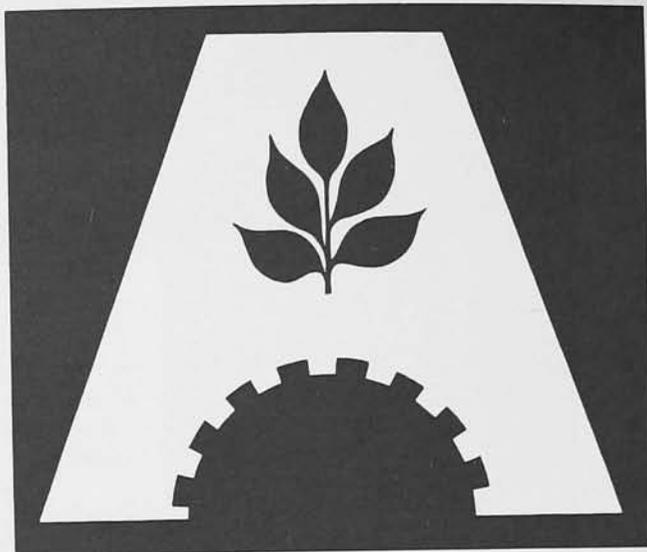
DR. ARMANDO SAMPER, '43, has recently been appointed Minister of Agriculture by the President of Colombia. He was previously director-general of the Inter-American Institute of Agricultural Sciences in Costa Rica. Dr. Samper was in Cornell last November for a conference on Latin American rural development sponsored by the Cornell Latin American Year and the New York State College of Agriculture.

LOWELL C. PECKHAM, '38, 81 North St., Walton, New York is assistant to the president for community relations for the New York State Agricultural and Technical College at Delhi. He is a real estate broker and vice-president of the Otsego-Delhi Board of Realtors.

EARL W. BENJAMIN, '11, Branchport, New York, is enjoying his retirement. He received his M.S.A. and Ph.D. from Cornell in 1912 and 1914, respectively. His special interest consists of landscape gardening and trade organizations.

PICTURE CREDITS

Cover and pages 8, 9 – Cornell University; page 3 – Courtesy Mr. and Mrs. W. Sturdevant; pages 5, 6, 10, 12, 13, – John Church, Communication Arts; pages 7, 14, 15 – Photo Science; page 11 – Courtesy Grant Mayne.



SIMPLE, YES. BUT....

Cooperation and understanding between rural and urban America in the interest of progress and good living might seem to be goals too obvious to need emphasizing — the benefits too clear-cut to require definition. Farmers produce the food and fiber, and the rest of society supplies the goods and services to build and operate the complex mechanism of a modern civilization.

Simple, yes. But also wonderfully complicated, wonderfully efficient and productive . . . and, too often, taken for granted.

Therefore, a special "Alliance for Farm-City Growth" award has been created in this State for the first time.

Convinced that competition promotes interest, the New York State Farm-City Council and its chairman, A. A. Johnson, also director of Cooperative Extension at Cornell University, designed the award. (Popularly called the

"Big-A.") It will be given to communities showing outstanding accomplishments in the day-to-day relationships between agriculture and rural people and the business and commercial world of urban people.

Selections for the award, to be symbolized by a plaque and a flag, will be made this month. Chambers of Commerce throughout the State were invited to nominate their communities. Competition will be continued in future years.

The College of Agriculture at Cornell congratulates the Council on this move, for it believes that the interests of farmer, consumer, businessman, processor, and marketer are inseparable. The College, too, constantly strives to make more New Yorkers than ever before aware of just what this reciprocity of interests means to them and to their communities.

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CORNELL COUNTRYMAN

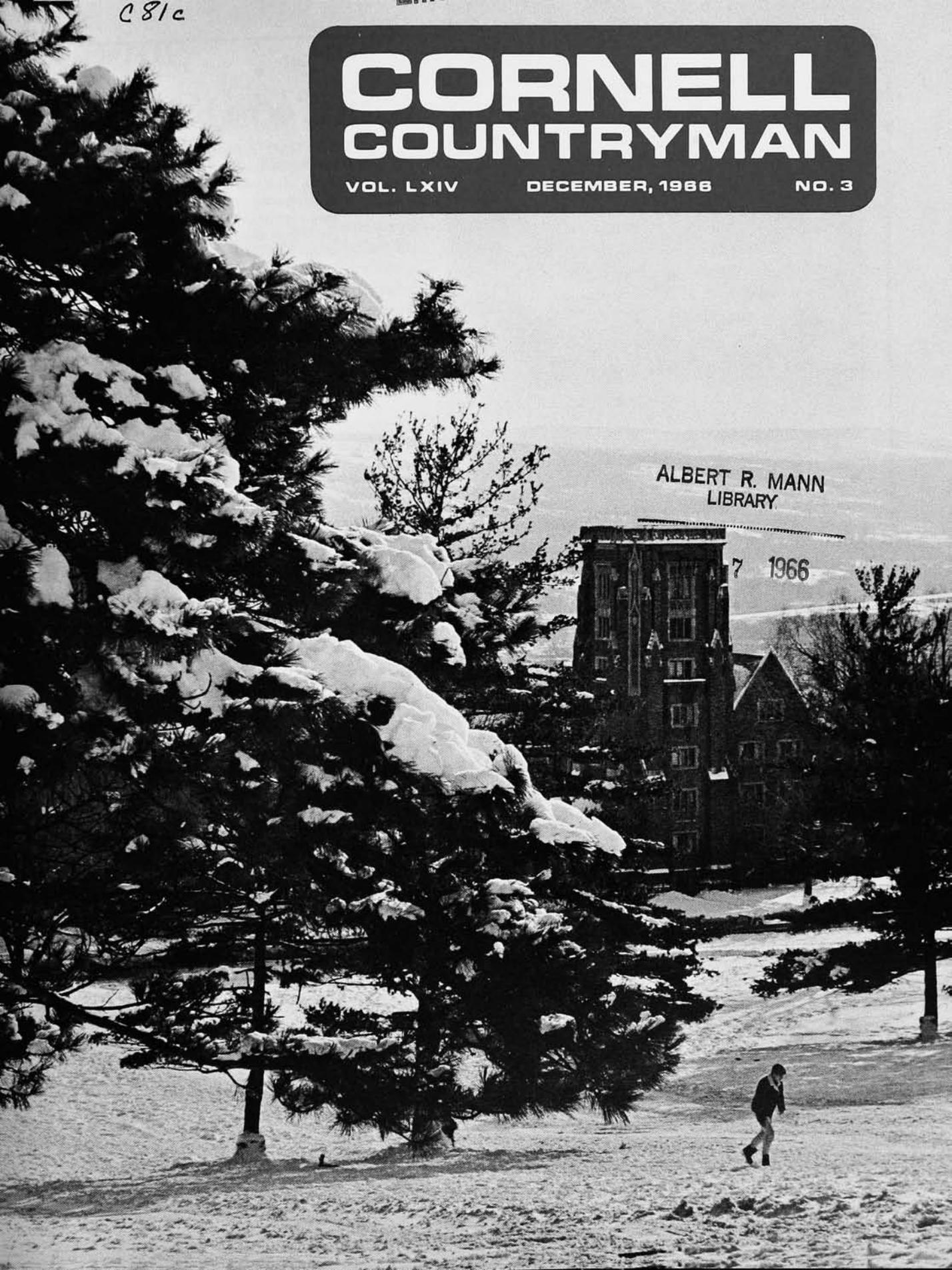
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ON THE COVER

Libe slope—a familiar sight to all Cornellians, particularly freshmen males. On a crisp, cold winter evening, an invigorating slide down the steep snow-covered incline makes the agonizing early morning treks back up the hill almost worthwhile.

CORNELL COUNTRYMAN

DECEMBER 1966 / VOL. LXIV — NUMBER 3

EDITOR-IN-CHIEF: Joan Solomon, '67; **MANAGING EDITOR:** Alan Hall, '67

EDITORIAL STAFF — *seniors:* Earl Conti, Gene Goldenberg, Christi Merritt, John Short, Jerryanne Taber; *juniors:* Brooke Breslow, Mary Jane Ferguson, Peter Goll, Alexander Harwood, Maria Melynk, James Montanye, Gregory Morris, Jane Silvernail; *sophomores:* Michael Barclay, Harold Batty, Phillip Langton, Emily Miller, Charles Wilson; *freshmen:* Rodger Beck, Marya Dalrymple, Susan Jones, Daniel Pritchard, Gregory Robinson.

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Shoe-ing

The Other Foot

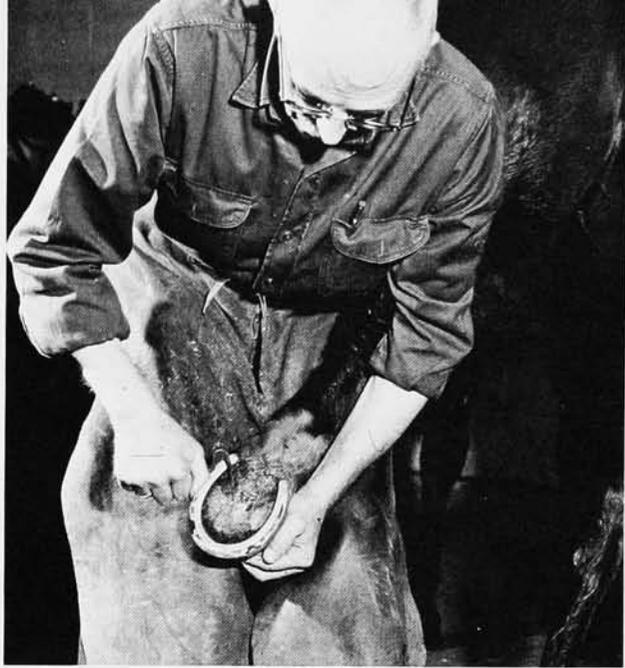
by ALAN HALL '67

Entering Cornell's blacksmith shop was like stepping 100 years into the past. The blacksmith stood before the glowing forge, his hammer ringing against the anvil. Sparks darted from the cherry-red metal and splashed onto his leather apron and the floor at his feet. A battered roll-top desk stood by the wall, an old pendulum clock ticking inaudibly above it. The walls were hung with horseshoes of every size and shape. An outdated calendar with a faded Currier and Ives print of race horses dangled from a nail by the door.

The farrier, Mr. Harold Mowers, was just finishing a set of horseshoes. While his apprentice watched, Mr. Mowers approached the horse and patted his head. He spoke to the animal in a soft, soothing monotone as he gently lifted its hoof and held a hot shoe in place. He reassured the horse while thick, white smoke rose from the hoof and the shoe burned itself in, assuring a smooth, comfortable fit.

Then he reheated the shoes in his forge until they glowed dully and threw off little popping sparks. Quickly he hammered the nail holes in each shoe. To cool the completed shoes he dropped them into a bucket of water. A hissing cloud of steam poured into the room. When they were cold he picked them out of the water, placed one on top of the other, and held them up to the light. The holes matched exactly. It had taken ten minutes to fashion two perfect horseshoes from two feet of iron rod.

A Cornell smithy heating a shoe in his glowing forge.



Blacksmith shoes a horse at Cornell's Farriery.

In 1965, Mowers was selected from some of the best blacksmiths in the country to become Cornell's teacher-farrier. Every year he trains three boys in the art of blacksmithing at his farriery in the New York State College of Veterinary Medicine at Cornell.

Mowers teaches his students in the same manner he was taught in '33. "After all," Mowers grins, "horses are still the same."

With the horse population increasing more rapidly than the number of skilled blacksmiths, Mowers' course is becoming increasingly more important to horse owners. Few other courses in blacksmithing are as comprehensive as Cornell's. Each boy selected for the course works as an assistant to Mowers 40 hours a week for 16 weeks. During the course the student learns hoof anatomy, studies diseased and abnormal hooves, as well as learning to make horseshoes and shoe horses. Before a boy is allowed to make his first shoe he learns to work with metal by hammering round rods into square ones, then octagonal rods, and finally back to round. And he makes all his own tools. Finally he begins making shoes.

Mowers' opinion is that even 16 weeks is too little time to learn blacksmithing because he "learns something every day." He says, "About all I can do is get a boy started."

The boys that he teaches are carefully chosen. The most important factors are that the boy love horses and "will go out and make a living at it." Mowers tries to avoid boys who just want to learn blacksmithing because they need a job.

Mowers intends to continue working as long as he can do a good job. He says, "Blacksmithing is a good, honest living but you'll never get rich. You've just got to love horses." And he does.

Behind The Scenes . . .

by EMILY MILLER '69

When Mrs. Vivian Laube became Concert Manager in 1955, Cornell University sponsored approximately 25 concerts a year. Since that time, Cornell concerts have increased to almost 90 per year. Those 10 years of enormous growth have not passed without their memorable moments, both humorous and frustrating. Although Mrs. Laube has subsequently left Cornell, she will not soon forget those hectic days.

During her first year as Concert Manager, Mrs. Laube engaged Elisabeth Schwartzkopf to sing at a concert. The morning before the concert Miss Schwartzkopf called in sick. As a substitute, the Faculty Committee on Music employed David Oistrakh, the violinist, who played a special concert. When violinist Zino Francescatti later canceled his program because of food poisoning, Zinka Milanov sang in his stead, thus exchanging fairly, voice for violin.

The half-hour delay before the Van Cliburn concert last year also caused worry and dismay for the Concert Manager. In the confusion at the airport, Mr. Cliburn had mislaid his baggage with his dress suit in it, and "of course, with a man his size, you don't borrow a set of tails too easily." But the suit was found, and the show did go on.

But the half-hour wait for Van Cliburn did not set a record. A previous audience waited over an hour while David Oistrakh ate dinner. In his attempt to get from New York City to Ithaca, Mr. Oistrakh encountered a fog which had immobilized Newark and La Guardia Airports. He and his manager hired the last limousine and chauffeur remaining in La Guardia Airport. Through a typical Ithacan rain-sleet blizzard, the chauffeured automobile pushed on through to Ithaca. A hungry Mr. Oistrakh managed to get to Bailey Hall on time, but asked the kind indulgence of the audience while he had some dinner.

Although Mrs. Laube was a bit harried by these experiences, she succeeded in booking artists for both the Faculty Committee on Music and the music department in conjunction with Willard Straight Hall. Presently, Mrs. Charlotte Shull, previous administrative aid in the College of Architecture, is Concert Manager for the Faculty Committee on Music. Taking over Mrs. Laube's position in the music department is Mrs. Mary Cullen, who has been with the department since 1962.

The Faculty Committee arranges such events as the



Van Cliburn, a performer in last year's Bailey Hall Concert Series.

Bailey Hall Concert Series. Since the series, which originally offered six concerts, could not accommodate enough students, the Committee organized the two four-concert series. Although there is an attempt to balance the two programs, generally "one ends up a little more popular than the other."

The Committee also offers the Chamber Music Series, which last year presented the Julliard String Quartet. The ballets and operas brought to campus generally come through the Faculty Committee.

The music department with Willard Straight Hall tends to sponsor less formal programs. Most of the concerts are free; they feature talented students, faculty members, and occasional guests.

During the Monday evening concerts, from 4:30 to 5:00, connoisseurs of music may listen to such compositions as Haydn's "Musical Joke." The Department also sponsors such works as Haydn's "The Burning House," an opera for puppets.

Despite the many frustrating problems that booking performers entails, Cornell succeeds in offering a varied and artistic program of musicians, dancers, and singers. Much of the credit for Cornell's extensive offerings must go to the Concert Manager, who is in charge of engaging those performers and planning around their misadventures.

The Jansen and Agnes Noyes Hall

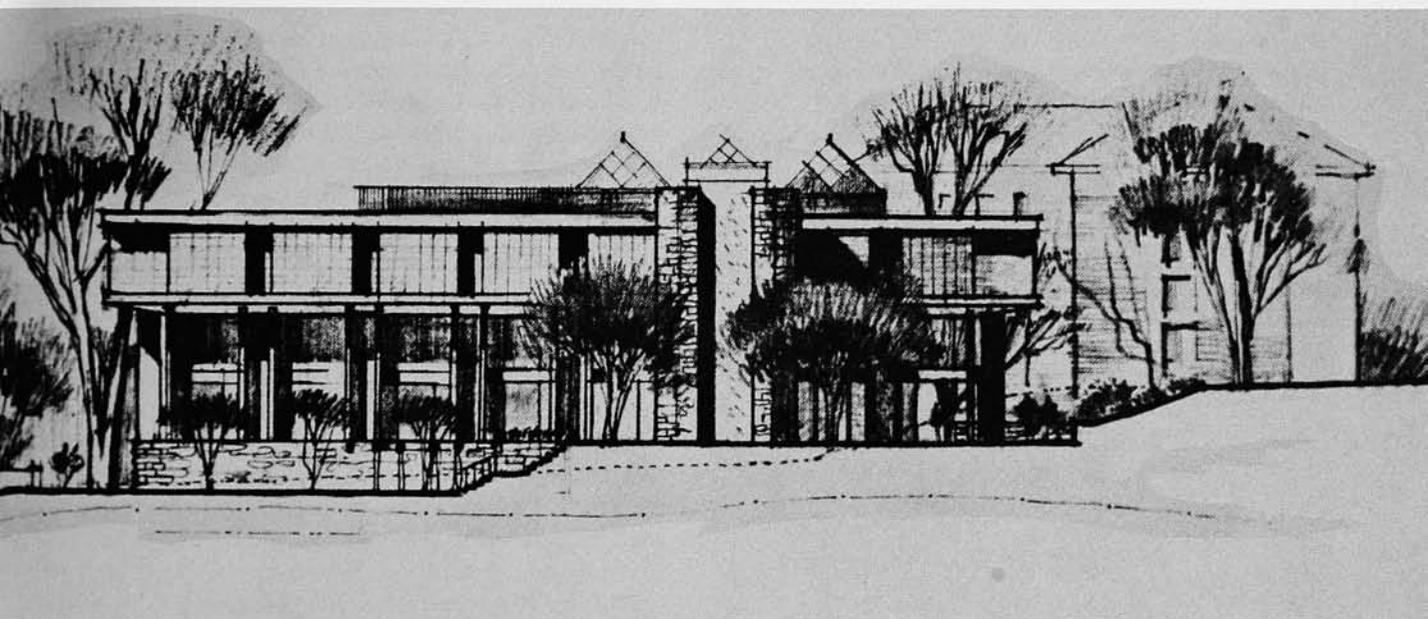
by MICHAEL BARCLAY '69

"A focal point of student social activity for the Cornell community . . . An opportunity to meet new people and make new friends in a warm, quiet atmosphere . . . A place to study, to dine, or just to relax." These are some of the hopes and dreams envisioned for the Jansen and Agnes Noyes Hall, now under construction.

Situated between University Hall dorms three and four and facing Stewart Avenue, this new building is intended to relieve some of the strain on the facilities of the 41-year-old Willard Straight Hall. "Willard Straight Hall was originally designed to meet the needs of 5000 students. With the 13,000 students now attending classes and the expectation for more in the future, the expan-

facilities. This gleaming, stainless steel serving area will be able to rapidly fill the needs of the students in the dining room measuring approximately 66 feet long by 88 feet wide. Preparation of the food will take place in a large, modern kitchen directly behind the food serving area.

The third floor will contain a large study lounge, two study halls, four seminar rooms, and a music room. The spacious study lounge, 92 feet long by 57 feet wide, will serve the same purpose as the Memorial Room in Willard Straight Hall. Here too, movies will be shown and talks given. The study halls will be reserved exclusively for study purposes.



sion of the dining and recreational accommodations is necessary," said Vice-Provost Mackesy, head of Regional Planning.

The first floor will consist of two parts, a recreational area and a rough lounge. The recreational area will be large, with open space for billiards and table tennis.

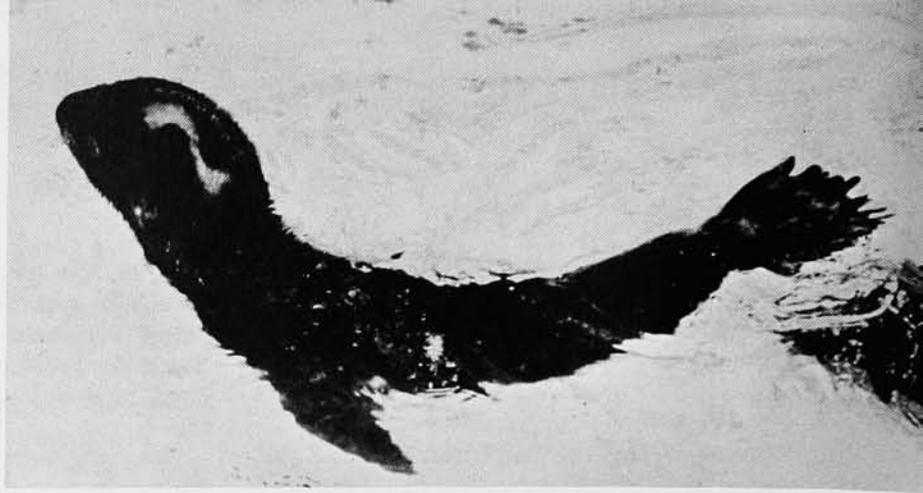
Two smaller rooms will be set aside for more active recreation. The rough lounge, with a surrounding patio, is designed for casual relaxation and conversation. The unfinished brick walls are hoped to lend a warm rustic atmosphere to the room. Along with the gentle murmur of voices, there will be the not-so-gentle sound of music from the bands that will play at dances held there.

The second floor will be entirely devoted to dining

When asked about other projects in the vicinity of the University Halls, Vice-Provost Mackesy replied, "The building of the Jansen and Agnes Noyes Hall is just the beginning of the changes to take place in that area. The grounds immediately around the building will have a patio with benches and well-placed shade trees. The present parking lot for the dorms will be rearranged to provide for more efficient means of parking. The whole area, north to University Avenue, will eventually be reshaped and beautified. It is only through contributions of alumni such as Mr. and Mrs. Jansen Noyes, Sr. and Mr. Jansen Noyes, Jr., who donated a large share of the costs for the building, that these improvements of the Cornell University campus are possible."

Saving The Seal

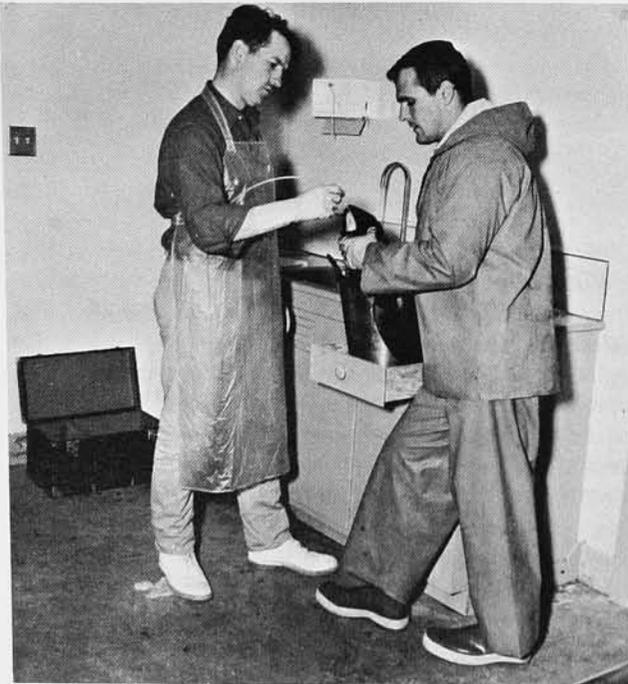
by CHRISTI MERRITT '67



Although the subject of veterinary medicine is broad and intensive, few people realize that it goes beyond the subject of domestic animals. But the fact is that this science goes much farther, into studies of wildlife diseases and comparative medicine. It deals not only with domestic animals, but with deer, fox, rabbits, and more recently the fur seal.

Among those involved in the study of the northern fur seal is Terry Wilson, a student in the New York State College of Veterinary Medicine at Cornell University. In 1963 he took a leave of absence from the conservation department, where he was a master's candidate in wildlife management, to enter the vet college. "After graduation in June, 1967, I'd like to work in wildlife diseases and comparative medicine," he said. "I figured I'd have

Dr. Keyes (left), is assisted by Terry Wilson in tube-feeding a fur seal.



a chance for a better position with a degree in a field of conservation."

Terry discovered this opportunity quite by accident. While reading a copy of a veterinary journal, he saw an article about the sealing operations and research being conducted by Dr. M. C. Keyes, veterinarian for the Marine Mammal Biological Laboratory in Seattle, Washington. He wrote to Dr. Keyes, asking for summer work and for permission to collect data for his master's thesis. Permission granted, Terry spent the summer of 1965 doing research under the direction of Dr. Keyes, and later under Dr. D. Q. Thompson, of the conservation department at Cornell. His main interest was in the behavioral habits and husbandry management of the northern fur seal pups.

Research was begun on the Pribilof Islands in the Bering Sea, the summer home and breeding grounds of the northern seal. These islands are the center of the fur sealing activities and are under the jurisdiction of the Bureau of Commercial Fisheries.

Once the home of approximately two to four million seals, the population declined to about 200,000 in the early 1900's. At that time, large numbers were killed for their valuable skins. Since 1911, however, the population has risen to one and one-half million because of strict control by the United States government. Management research has been largely responsible for the population rebound from near extinction.

Dr. Keyes has been primarily concerned with pup mortality, since as many as 90 percent die before reaching the harvestable age of two to five years. Autopsies on pups have revealed disease processes that are very similar to specific diseases of domestic animals, explained Terry. "But we have to learn more about the disease processes, and relate our lab findings to the lessons we see in the field before we can say why so many young die."

Terry worked primarily on husbandry practices and behavioral patterns of captive fur seals. His subjects were 24 pups taken from their mothers at about three days of age. The researchers found it easy to tell the age of the animals because the mothers are very protective of their newborn. After a few days, however, they make no

“Veterinary medicine is a lot more versatile than most people give it credit for.”

attempt to protect them, and will turn and run if approached, leaving the pups behind.

These seals are not the friendly, entertaining clowns associated with marine circuses. Terry said that they are valued mainly for fur, and few are kept in captivity. They are not friendly and have to be handled with restraint, because their dispositions are highly unpredictable.

Everyone working with these seals is cautioned to wear rubber gloves, not only for protection from bites, but as a precaution against “seal-finger,” a disease that can be contracted from handling seals or seal products. “It causes severe infection of the soft tissues and eventually the bones of the fingers, Terry explained. “Fifty years ago it was a serious problem but it can now be controlled with modern antibiotics.

The seal pups were fed a prepared formula through a stomach tube while in captivity. Terry explained that this method was not only the easiest, but that they could be sure that a certain pup got a measured amount of a particular formula at each feeding. This made it easier to compare their weight gains and general health in reaction to each particular diet. All of the pups resisted the first few feedings by this method, but later accepted it as a matter of course. In fact a few eventually learned to pick up the tube, swallow it, and wait to be fed.

At present, experimenters are still trying to create an acceptable artificial diet for captive pups, similar to the one provided by their mothers. To do this, samples are taken from females and analyzed for percentage of protein, fat, ash, etc. Then these percentages are matched in the amounts of constituents put into the artificial diets. The type of ingredients is also varied. For example, fish flour is used as a protein source in one diet, and casein in another. Then the formulas are tested for their effect on the young seals. Once an acceptable diet has been perfected, captive pups can be used in a variety of anatomical, physiological, reproductive, and pathological studies to give further clues to fur seal mortality and management.

None of the seals in the experiment lived beyond five months. Their death was due to a variety of causes, in-

cluding pneumonia, malnutrition, and parasites. Hookworms, which infest the entire seal population on the island, are thought to be passed to the pups in their mothers’ milk. Since it was presumed that all of the experimental pups had nursed at least once before capture, all were believed to have the parasites.

For years it was thought that mother seals taught their young to swim. However, after a pool was installed in the pen, the captive pups swam as normally as wild pups, and with no maternal instruction. They also mimicked other types of adult behavior in play and in mock battles, indicating that these actions are innate to seals, and not learned.

Terry described life on the islands as rather bleak. The weather is similar to that in Ithaca, with fog and rain much of the time. “And,” said Terry, “there’s a woman behind every tree — there are no trees!”

The villagers work for the government in the sealing operation. From 50-60,000 skins are taken every year at a value of about \$150 each. A seal-skin coat costs about \$5000. Research is now underway on the use of the rest of the carcass in mink feed. It is reported to be a very good diet for these animals.

In addition to a master’s degree, Terry gained a lot of experience. “To me,” he said, “it shows that veterinary medicine is a lot more versatile than most people give it credit for. I’m all for it.”

Terry Wilson, working with fur seals in pup pen.



REVOLUTION OF EXP

by ALEXANDER HARWOOD '68

More than one-third of Mexico City's inhabitants live in slums. One-half of Ankara's 1.5 million people are slum dwellers. The population of Calcutta will reach 60 million by the year 2000. And the United Nations has predicted that over 200 million additional people will move into the world's cities in the next decade.

The "favelas" of Rio, the "villas miserias" of Buenos Aires, and the nameless slums all over the world are plagued by filth and dirt. Even the most rudimentary sanitation facilities are luxuries. These shanty towns are eyesores. But even close inspection and research do not make the complex socio-economic problems found here clearly evident. Why do people come, even when they know that sickness and death stalk the poor? How can these people be helped? These questions must be answered if urban problems are to be solved.

According to Prof. Jose Villegas, who is teaching a two-semester seminar on "Social Aspects of Housing and Urban Development in Emerging Countries" in the Department of Housing and Design of the New York State College of Home Economics at Cornell, "We have reached a point where we have lost control of growth." But, he added, a "revolution of expectations" is taking place.

Professor Villegas has worked with the housing and urban committee development section of the U.N., the Pan American Union, the Inter-American Regional Hous-

Families laying the foundations of their home being built by government-supplied materials.



Peasants in Bogata, Colombia, carrying bricks as part of the "self-help" program.

ing Center in Bogata, Colombia, the planning commission in New York City and many other groups seeking solutions to these problems.

He explained that modern communications techniques have made the concept of the isolated rural man obsolete. Even a small transistor radio brings news of the world into areas that were until recently completely isolated from society. Today, according to Professor Villegas, you can go into the African Bush and discuss politics and the role of the U.N. Security Council with tribal chiefs.

But political news is not all that these formerly isolated rural dwellers are aware of. The modern American image of an affluent society, one filled with cars and television sets and convenience appliances, is projected to the rural dweller. According to Professor Villegas, "The impact of modern U.S. living is tremendous." But, unfortunately, the impact on the cities of immigrating rural dwellers is equally tremendous and often catastrophic.

The enormous influx of rural dwellers in the city has created new and paradoxical problems. Modern communication has created urbanization without sufficient industrialization. Rural inhabitants anticipating a modern way of life move into the cities, but the urban centers in these underdeveloped nations are not capable of providing employment or the necessary facilities for these people.

STATIONS

In many areas law forbids the people from settling in the areas which develop into shanty towns, but the people ignore these laws. The new urban residents, because of their background and their numbers, are creating new problems and even molding the character of the cities. The immigration of rural dwellers has reached such a point in some areas that the cities themselves are being ruralized. Professor Villegas estimated, "Usually, from 10-35 percent of these cities are rural. If this trend is not controlled within the next 30 years, the panorama of these developing countries will be shanty towns."

The greatest problem presently confronting these areas is one of priorities. What should be done first and how much of it should be done? With their limited knowledge and understanding of the nature of the problem, administrators are finding it difficult to decide what should come first, electricity or schools, homes or sanitation facilities, property or jobs. Many of these developing nations lack the money and the natural resources to do anything at all.

The problems are complex and frustrating but Professor Villegas maintains that they are by no means hopeless. He said, "Aid has reached only the surface of the problem. But now we have reached a point where we have a better understanding of the problem." Research and a realistic attitude were cited by Professor Villegas as the reasons for hope. He said, "We have begun to study more

scientifically an area in which millions of people are involved, and we are now getting some very good research." Until recently the only studies of slum problems being made were conducted by the countries they occurred in, but now universities, the United Nations, and many other groups are conducting intensive research with good results.

A new attitude, however, is what is most important. An idea of self-help, which has finally come over from romantic platitudes to a realistic evaluation of the circumstances, is making progress possible. Professor Villegas put it this way. "Ideas of self-help, even in America, are not romantic daydreams, but complex concepts." Concrete steps are being taken to help the new urban dwellers. The result, according to Professor Villegas, is "Rediscovering what it means to help yourself."

In Ghana a program has been started whereby the government provides the roof and frame of the house and the rest is up to the individual. In Latin America, the Alliance for Progress has placed priority on institutionalizing finances, and everywhere housing and finance cooperatives have been mobilized to help the people to help themselves.

Professor Villegas' seminar is based on his experience in this field and case studies from all over the world. It touches on urban development strategies for urban marginal areas; self-help methods, housing and planning for areas in the initial stages of social and economic development; cooperative housing; city regional housing and planning, new towns, and rural housing and planning. Social, political, religious and administrative institutions are considered as well as the problems facing the cities and underdeveloped nations.

Obviously, courses and even universities cannot bring any direct help to people who look upon the necessities of life as luxuries. But they can help, through research and understanding, to make the "revolution of expectations" a revolution of realizations.



COUNTRYMAN CAPSULES

The College of Home Economics at Cornell University is preparing for another advancement in the field of communications. Scheduled for completion in late 1967 is a complete television recording center, now under construction as part of the Van Rensselaer Hall expansion project. The center will be used primarily as an instructional resource.

Designed and financed by the State University of New York, the television project will be a vital link in the statewide educational system which is also undergoing expansion at this time. The new studios, when complete, will surpass the finest college installations in the country today. Two complete and independent studios will be complimented by an estimated \$350,000 worth of the finest professional equipment available. This equipment will include camera and film chains, high-intensity lighting, audio systems, and videotape machines. The addition of these facilities to the existing television film center will rank the Colleges of Home Economics and Agriculture among the leaders in the production of educational television programs.



Matthew Drosdoff, head of the International Agricultural Service, USDA, since 1964, will join the faculty of the New York State College of Agriculture this winter. Currently administering government programs and policies for agricultural development throughout the world, he will teach a course dealing with the character of tropical soils.

Mr. Drosdoff has held federal positions as soil surveyor, soil chemist, soil scientist, and soil adviser. In 1950 he was a member of a special U.S. government mission to Latin America to identify soils and mineral nutrition problems of abaca (Manila hemp) production.

Well-versed in Spanish, German, and French, Drosdoff has written a booklet on chemistry of soils in Spanish for his teaching in Latin America. He has authored more than sixty technical papers on topics ranging from genesis of claypan soils to copper deficiency of tung trees.



IRMA has come to Cornell. No, IRMA is not a student. She's a \$12,000 machine called an Infrared Milk Analyzer. She operates by passing a beam of infrared

light through a thin layer of milk. The various components of milk absorb different wave lengths of the light and IRMA reads the absorption at these wave lengths.

The machine can analyze milk components and express the results as percentage data in less than a minute. Presently, the accuracy of these data is being compared to the conventional chemical tests like the Babcock test for butter fat and the Kjeldahl procedure for protein.

According to Profs. John W. Sherbon and W. Frank Shipe of the New York State College of Agriculture, IRMA's high cost limits use to food plants using large quantities of milk where protein quality has to be controlled.



Cornell co-eds had a unique opportunity, to meet and talk with members of the Central New York Chapter of American Women in Radio and Television. On October 28-29, a career symposium was sponsored in conjunction with the New York State College of Home Economics. In addition to attending a series of talks which described opportunities available in radio and television, the students met the participants personally at breakfast, Saturday, and also participated in a panel discussion later that day.



Secretary of Agriculture Orville Freeman announced that price supports of \$4.00 per hundredweight for milk used in manufacturing dairy products will be continued through the next marketing year, beginning April 1, 1967. The present support price of 68 cents per pound for butterfat in farm-separated cream will also be continued.

Secretary Freeman explained the announcement, "I am announcing the dairy support level for 1967-68 at this time in order that dairy farmers can plan their future dairy herd management with greater confidence as to next year's prices, and to provide greater assurance of adequate supplies of milk and dairy products for consumers." He continued, "The added assurance provided by today's announcement should further slow up the exodus of farmers out of dairying."



CAUTION: Children At Play

by MARY JANE FERGUSON '68

"But when do they start to work?" is a frequent question of parents anxiously watching their young children while away the hours engaged in various playtime activities. The often surprising answer to this question is that "work" is learning, and learning is play. To inform parents, as well as doting older sisters, brothers, aunts, and uncles, Cornell has recently produced two films called "Choosing Children's Toys" and "Learning While They Play."

The first film, "Choosing Children's Toys" makes three basic points about toys. They should be safe, fit the ability of the child, and aid the child's development. The tragic implications of poisonous paint or sharp edges on a toy for a taste-it, feel-it, and tear-it-apart-and-see-how-it-works young child are clear. Narrator Robert Earle also explains that the child's age, size, and ability should suggest the type of toy appropriate for him. A large book with thick, easily turned pages, for example, is much more appropriate to a small child whose hand co-ordination is not developed, than would be a smaller, more delicate book.

Finally, Mr. Earle points out the need for toys which will aid the development of imagination and maturity in the child — toys that will allow the widest opportunity for free expression with color and form, and the widest opportunity to develop muscular and mental skills as the children play.

The second film, "Learning While They Play", is a longer, more general commentary on the value of play to a child. The narrator, Dr. Clara Baldwin, former head of the nursery school maintained by the New York State College of Home Economics at Cornell University, points out that play has profound learning implications. Children develop independence, social and motor skills, and innumerable basic concepts such as weather, time, and size. The film deals with a variety of play-as-learning activities in which children are constantly exploring and discovering their physical and social environments.

One of the children, Jimmy, adds an interesting dimension to understanding child development as he searches

for a stool to climb higher than his block structure so he can make his structure even higher. Dr. Baldwin points out that a younger child might not be able to cope with such a problem, unable to turn from his absorbing task long enough to look for a stool or forgetting his task altogether by the time he found a stool.

The values of outdoor play become clearer as the children face real, active challenges, crawling over jungle gyms they ignored the first day of school, playing on swings and slides. Two children who own a toy sailboat decided to dig their own waterway. Strategic problems in locating a good place, digging the stream bed, lugging a heavy pail of water, and filling the stream, end in success as they happily launch their boat. Not only have they gained a "stream," but they have also learned to plan, cooperate, and work together effectively.

The children gain an understanding of color, form, and texture in their art activities. Free to follow their imagination, they explore varied sensory experiences from enjoying the goo of finger paint to understanding what happens when they mix colors.

Social interactions and role-playing predominate much of what is termed "dramatic play." "I'll be father and you be the baby." In this type of play, they get to see themselves in different roles and to try out some of the adult world on their own.

A bulletin entitled "Play as Learning" — by Dr. Clara Baldwin, now of the Department of Psychology at New York University and Dr. Helen Bayer of the Department of Child Development and Family Relationships at Cornell University — supplements the film.

Both films show children learning through their play, with or without toys, emphasizing the importance of the interested, well-informed adult. "Choosing Children's Toys" and "Learning While They Play" are distributed to television stations, extension workers, and classrooms to help adults and students understand the importance of children learning at their play — learning skills and concepts which are as real and essential as any later gained from a textbook or classroom teacher.

COUNTRYMAN INTERVIEW

This month's interview was conducted by Maria Melnyk '68, a staff member of the Cornell Countryman. She spoke with Joseph P. King, chairman of the Advisory Council for the New York State College of Agriculture at Cornell.

The Council for the New York State College of Agriculture and the Agricultural Experiment Stations convened on the Cornell campus October 31 and November 1. In an interview with the *Countryman*, Joseph P. King, chairman of this advisory council, spoke freely about the council's role and the issues facing the College of Agriculture and Cornell University. Mr. King, presently administrator of the Genessee Valley Regional Market Authority at Rochester, is a 1936 graduate of Cornell. Below, we present some of his views.

"This council, one of several authorized in the bylaws of Cornell University, is made up of 25 men selected by the President of the University and approved by the Board of Trustees. We meet with the dean and his directors and they present to us programs and activities of the College and point out problems concerning them. The council voices approval or disapproval of some activities, whether they have to do with the undergraduate program, research, or public service. Presently, we are speaking not only to the College but also to the University. It's been our experience, and we're very happy with this, that the top administration of the University becomes directly involved. We speak frequently with the president and the provost.

"The 'student quota' established by Cornell for the College of Agriculture is something that has been necessary during this period. I can understand the reason for

the decision but I personally hope that the quota will be temporary.

"I foresee a situation where the College will have more outstanding transfer students from the state agricultural and technical colleges and from the community colleges. They will come here for their junior and senior years. This would be one way of increasing the number of graduates without substantially increasing the number of freshmen.

"**The difference between students** today and those back in the 'geological time' when I was here is not as great as often portrayed. Being quite active in the student recruitment program for the College, I have spent increasingly large amounts of time working with prospective applicants in secondary schools. I claim to be fairly close to young people and I have selfish reasons for doing this. If we are to understand young people, we must be close to them and really know what causes them to think and react as they do. And I say there isn't much difference in the basic motivations of boys and girls today and those of years ago. They react much the same. One difference is that we had an economic problem in the depths of the depression. I never missed a meal, but I sure postponed a lot of them. This is literally true. There were times when we just didn't have enough to eat, but the next day we would catch up. My food costs at Cornell were about \$2.45 a week. This was our big

Director Everett speaking at a meeting of the Advisory Council for the College of Agriculture.



problem, but we could do something about it. Today, students are faced with world problems – including Vietnam. When I was an undergraduate, ‘the war to end all wars’ had ended years before (World War I). Today, every boy is directly involved with the problem of peace.

“The question of the emphasis on undergraduate and graduate instruction has been raised. In my opinion, there will always be a balance between the two. I say this in full recognition of the fact that the long-time trend for the University seems to be more growth at the graduate rather than the undergraduate level.

“We’re pleased the College has been able to keep a high enrollment – the highest or second highest in the U.S. – even though trends have been in the opposite direction. I have been watching this for a long time. In 1954, when I was president of the College of Agriculture Alumni Association, I distinctly remember we recognized that if the food industry was to be served as it should, and if the College was to get the public support it needed for growth and development, the curriculum would have to be improved and expanded. The faculty and the administration also recognized that the College should provide undergraduate instruction in a wider range of fields. This in itself attracted many fine students. Along with this improvement, an aggressive recruiting program involving the alumni was undertaken. In many instances, this program was integrated into the secondary school committees of Cornell Club groups. At the same time, the College made some other positive moves, such as preparing material that was useful to guidance counselors, bringing high school counselors and their students to the College. All of these things have contributed substantially, and they must all be there if we want to get a fair share of the most highly qualified students.

“Basically, we are looking for young men and women who are in the top 20 percent of their class in high school with SAT scores of 550 and higher. And, it is important to ask these questions: What kind of person will he be as an undergraduate? What will he do for Cornell while he is here, and what will he do for Cornell after he graduates? We must go beyond what will Cornell do for him. Most important, what is the likelihood of this person accepting the responsibilities of leadership in the community in which he will live, whether in this country or abroad?

“Should basic or applied research receive more empha-



Joe King, chairman of the Advisory Council.

sis at the College? The present breakdown is approximately 45 percent of the funds for basic and 55 percent of the funds for applied.

“The College has a long history and world-wide reputation for excellence in both types of research and both are important. With the competition for dollars to finance both types of research, it behooves us more than ever to carefully select those things we can do better than anyone else and direct our attention to them. We have many needs for applied research to keep New York’s agriculture healthy and competitive with other states. More attention, however, should be given to checking with other institutions in the northeast so our work will be more efficient and there will be less duplication. We should avoid what I call ‘putting out the fire’ type of research projects where someone wishes to do a quickie applied research project. I can’t buy that, nor do I think we can justify applied research that has too narrow an interest.

“Different entrance requirements than the other colleges of the University may call for more coordination among the colleges. I think we are moving very well in that direction, but I don’t think there is a place for complete standardization. The situation in the College of Arts and Science is different than that in this college. Here you find students whose motivation is more clearly defined, and they should move faster in the direction of their major interest. More emphasis should be placed on trying to evaluate motivation and other factors rather than putting too much emphasis on class rank and college board scores.”

4-H Ambassador To Washington

On September 29, Jack Bossard, a junior in the New York State College of Agriculture at Cornell, arrived in Washington, D.C. to deliver a "4-H Report To The Nation" as part of National 4-H Club Week.

Bossard was selected to be one of six "travelling ambassadors" to Washington on the basis of his outstanding 4-H Club work over the past 10 years. The six representatives were chosen from 4-H'ers all over the country after submitting essays describing their activities in the organization.



Jack Bossard and AID Assistant Administrator for Material Resources, Mr. Jack Waters, look over a copy of the recently printed World Atlas of 4-H.

In Washington they met with President Johnson, Orville Freeman, Secretary of Agriculture, and their senators and representatives. They attended a series of 16 meetings and seminars on the activities, objectives, and goals of the 4-H movement. The group presented panels and individual talks to government agricultural leaders, followed by question and answer periods.

Jack was a good choice. During his 10 years of service in the 4-H Club he has done a great deal to "Make the Best Better" through his leadership and enthusiasm. Jack describes his 4-H work as "paramount in aiding my development of both useful knowledge and, primarily, in my ability to share this knowledge with others."

Soon after he completed his first project — raising a dairy calf given to him by his father in 1957, his interests broadened to horse raising, herd management, production records, improvement practices, breeding, judging, and finally, leadership.

Leadership in club activities is the activity that has been the most rewarding to Jack. He says, "The joy of learning is equalled only by the joy of teaching others."

by GREGGORY MORRIS '68

His first experience in leadership was helping six younger members with their dairy calf and cow records. After this he developed an insatiable appetite to help others. He has taught the fundamentals of dairy judging, and was instrumental in organizing and assisting a newly formed club in his area. He organized and conducted two barn meetings to help younger members prepare for dairy judging. Jack is also credited with the organization and presentation of three county fitting and showmanship demonstrations, and the management of the first local dairy show in his county.

In 1964, Jack was responsible for the training of the County Horse Judging Team which won first prize in the state. Currently he owns four horses (as well as 20 registered Holstein cattle). His horsemanship has won him 157 ribbons and rosettes and he has been the winner of the Senior Champion in showing.

When he was forced to take a leave of absence from Cornell during the spring term of his freshman year for a knee operation, he became more active than ever in 4-H activities. He became an assistant leader of his local club and helped to teach county judging schools. His most rewarding experience: "The privilege of leading 81 younger 4-H Club members in cattle projects."

Jack is currently enrolled in dairy husbandry and is testing minerals in a special livestock feeding program. On weekends he travels home to help his father with their herd of 90 Holstein cattle and "to keep up my 4-H activities and give individual help to local club members."

In conclusion, Jack says that "4-H has been a large part of my life since I was 10 years old and has proven to me that it is one of the most worthwhile activities a young person can undertake. I have acquired a vast knowledge of not only projects I have kept, but also of people."

A 1960 photo of Jack with one of his dairy projects.



ALUMNI

NORMAN J. HECHT, '42, So. Montgomery St., Walden, New York, is president and general manager of Hecht's Hatchery Inc., in Walden. He has been in this business since his graduation as a poultry major. Married to the former Lillian Strickman, '41, they are active in the local Rotary Club. They enjoy camping, hiking, and skin diving. Their son Stanley is presently a sophomore at Cornell.



HAROLD E. DENMARK, '14, 47 Front St., Van Etten, New York, farmed for 27 years before working with the Sperry Rand Co. for 17 years. His son, Monroe F. Denmark, graduated in dairy science with the class of '34.



DOUGLAS DEUEL, '36, P.O. Box 113, York, New York, is currently working with Agway. A graduate in extension, he married the former Gladys Wolfe, '37. They are members of the York Presbyterian Church and are active with the local 4-H Club. Their daughter Emily Anne is presently a sophomore at Cornell.



JOHN G. BRERETON, '38, RD #1, Norwich, N.Y. is the president and principal owner of Whitman Laboratories, Norwich, N.Y. He received the M.S. degree from the University of Minnesota in '39, and the Ph.D. from Cornell in '42. His daughter, Nancy L. Brereton, will receive the M.A. degree in Personnel Administration from Cornell.

RICHARD C. HOWARD, '63, 123 Saratoga Rd., Scotia, New York, is presently teaching high school chemistry and physics in the Burnt Hill Central School System. He is a member of the Schenectady Men's Glee Club and advisor to the Boy Scouts Explorer post 38. His brother George is now a sophomore at Cornell.



JOHN BABEL, JR., '61, Schoharie, New York, is now teaching agriculture in the Schoharie Central School. He was a First Lieutenant stationed at the U.S. Army Laboratories in Natick, Mass. before coming to Schoharie. His wife, Louise, joins him in his activities in the Kiwanis Club of Schoharie. He is presently a First Lieutenant in the U.S. Active Army Reserve.



MILDRED E. COURY, '48, 525 Jefferson Avenue, Utica, New York, is presently employed as a medical technologist at the Utica State Hospital Laboratory. After graduating from Cornell as a bacteriology major, she graduated from Syracuse's School of Education. She was a laboratory technician working with mastitis research at the New York State Veterinary College Branch Lab at Earlville, New York, before going to Utica.



RICHARD W. BOERS, '63, 618 Michigan St., Toledo, Ohio, is currently employed as a landscape architect for the City of Toledo Parks Division and the University of Toledo Arboretum. While at Cornell he majored in landscape design. He received the Masters in Landscape Architecture degree from the University of Michigan.

HERBERT J. DIETZ, '52, 14 James St., Sidney, New York, graduated as a rural education major and is presently Assistant Superintendent of Schools in Sidney. He received his M.E. from St. Lawrence University, Canton, New York. Along with his wife, the former Frances Doig of Cobleskill, N.Y., he occasionally tries his hand at woodworking and gardening.



CHARLES E. DALRYMPLE, '50, 33 Brookdale Road, Brockport, New York, has been with the Lincoln Rochester Trust Co. for 13 years. He is an officer in the credit and loan administration department. A graduate in agricultural economics, he still takes an interest in the Cornell Secondary Schools Committee of the Cornell Club of Rochester. When he finds available time, he enjoys fishing for muskelunge.



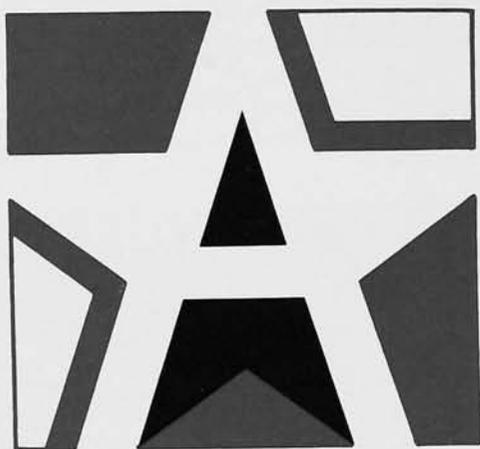
Editor's Note: The architectural firm of Dominguez, Hodgden, Cohen, Pearman, Shaw, Ithaca, New York, was responsible for the drawings in last month's "Proposed Conference Center."

PICTURE CREDITS

Cover — Sol Goldberg; page 4 — Hurok Attractions; page 5 — Todd and Giroux, architects; pages 6, 7, — Terry Wilson; page 8 — Prof. Jose Villegas; page 11 — Barrett Gallagher, Communication Arts; pages 12, 13, — New York State College of Home Economics; page 14 — U.S. AID, Jack Bossard. Sketches page 4, 9, — Jane Silvermail.

The College Salutes Its Council

Acquisitions Div.
Alfred Mann Library
Cornell University
Ithaca, N. Y.



A council's chief purpose is to advise and to give direction. If it accomplishes this task with singular success, it is likely to be a highly valued council — and a busy one.

Cornell's council for the New York State College of Agriculture and the Agricultural Experiment Stations is both. It has been described by a high University administrator in Day Hall as "one of Cornell's top two councils."

Little wonder. Its 25 members represent nearly every aspect of modern

agriculture in New York State — farming, processing, marketing, banking, communications, science education, and government. (Note the full roster on this page.) Twice a year they leave their businesses and duties to listen to and consider College issues and problems. During the year they are often consulted individually.

Most important, when the council speaks, the College of Agriculture listens. The College salutes its council. It deeply appreciates guidance given in the past and looks forward to future leadership.

MORTON ADAMS
Food Processing

RUSSELL R. BILLINGS
Agricultural Business

ARTHUR B. BURRELL
Fruit Farming

HERRELL F. DeGRAFF
Meat Industry

EDWARD S. FOSTER
Farm Organizations

DONALD D. HANKS
Dairy Farming

DAVID HARDIE
Dairy Farming

ALDEN B. HATCH
Scientist-Industry

RALPH L. HIGLEY
Banking

DAVID H. HUNTINGTON
Higher Education

HERBERT E. JOHNSON
Extension Education

JOSEPH P. KING
Marketing

EDWARD F. KNIPLING
Scientist

GEORGE L. McNEW
Scientist

THOMAS P. NEWMAN
Floriculturist

ROY H. PARK
Communications

HARRY W. PORTER
Higher Education

CHARLES H. RILEY, JR.
Marketing

FRANCIS R. SEARS
Dairy Farming

MAX V. SHAUL
Cash Crop Farming

JOHN H. TALMAGE
Vegetable Farming

THOMAS L. TODD
Poultryman

WINFIELD D. TYLER
Food Processing

DON J. WICKHAM
State Government

BRUCE W. WIDGER
Veterinary Medicine

ALBERT R. MANN
LIBRARY

JAN 16 1967

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NO. 4



ON THE COVER

Cornell's football season has come to an end, leaving Schoellkopf Field to sit alone and reflect on the past season. The coming year will bring new faces and even more excitement to the now deserted but ever proud crescent.

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CORNELL COUNTRYMAN

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A mechanical harvester, developed by Cornell, shakes the fruit from an apple tree.

FROM NUTS TO FRUITS

by **MARYA DALRYMPLE '70**

In 1931 the pecan industry initiated the use of a mechanical shaker to harvest mature pecans from the tree. Since that time, the shaker idea has continued to be utilized in the California nut industry. The machine was the epitome of simplicity. It consisted of a crank, a pole, and a hook attached to the tree. A man turned the crank, shaking the tree until the nuts began to drop.

Today, Cornell's Agricultural Experiment Stations at Ithaca and Geneva are developing the shaker idea into machines designed for rapid fruit harvest. They are combining the talents of engineers, pomologists, and food scientists with the cooperation of the farmer to further develop and perfect fruit harvesters. They have concentrated mainly on the mechanical harvest of apples, cherries, and grapes.

The machine being perfected for apple and cherry picking consists of two curved rubber-padded C clamps which can grip a branch three to five inches in diameter and with wrist action, shake it. The shaking has no adverse effects upon the branches or roots.

To carry out this harvesting process, the farmer has had to change the type of trees he grows. He has had to prune them in order to leave enough room below the lowest branch for the machine to come underneath. The first year this method was tried, the trees produced only 25-30 per cent of the normal yield. However, in the second year they produced 90 per cent and in the third year the yield was once again normal. Many farmers have begun to plant new trees which will grow with high limbs, eliminating the necessity for pruning.

It has been found that the use of the mechanical harvester causes no more damage to the fruit than hand picking. In addition, the unripe fruit is less likely to be collected since it generally withstands the shaking and doesn't fall off. Mechanical harvesting may even modify insect and disease control problems. There is little chance that cherries or apples will spoil since the fruit is washed almost immediately and the cherries are placed in ice water within 10 seconds after picking.

Experiments on the grape picker were started in 1957. After seven years of testing, the double curtain trellis system of grape harvest was developed as an improvement over the old single cross arm method. A special

grape trellis is used to meet the requirements of the machine. The new system, tested at first on Concords, provided for less pruning of the vines and the consequent exposure of more leaves to sunlight. The grapes are harvested by vibration of the vines, causing the fruit to fall off as single berries and not in bunches. This way, 99 per cent of the crop can be collected.

The two experiment stations are continuously trying to perfect new machines for easier and more practical fruit harvest. Big fruit farmers are realizing how necessary the mechanical harvester is to their business. Hopefully the machine, which is used now for cherries and apples, will soon be used on peaches and plums as well. At present, work is being done on a pronged peg board harvester for apples. If this harvester is successful, it will allow for the harvest of almost completely bruise-free fruit.

Always looking to the future, technologists are now considering a harvester for fresh fruit. "A machine such as this doesn't happen overnight; it takes years of technology and research," says Prof. John Cain of the Geneva Experiment Station. Mechanical fruit harvesting has greatly improved from the first pecan picker, and with increased experimentation will continue to alleviate the problems of the fruit grower.

The Cornell Grape Harvester is capable of picking grapes with less damage than hand picking.



Career Exploration:

The Choice is Yours

by CHARLES WILSON '69

What part should a college play in helping a student choose and prepare for a career? Should it welcome only those who have a specific field which they wish to study? The answer to this question clearly has to be a resounding "No." The New York State College of Agriculture at Cornell is an excellent example of a college which provides guidance for students without definite career plans.

Often students will start out in college with a major and, finding it unsatisfactory, will transfer to another department or to general agriculture where they can search further. The whole system is based on the fact that when a student starts taking college courses he finds where his strengths and interests really lie. With these discoveries he can then move to the area best suited to his capabilities.

The policy of the College of Agriculture is to make it easy for a student to explore different areas of interest while he is in school. The fact that there is no long and difficult process involved in changing majors is very important. The student can change his major by informing his present advisor and the advisor of the department he wishes to enter. If neither of the advisors have objections, then the transfer is quickly made.

The practice requirement of the college insures that every student gets some practical experience in his field of interest. This experience helps the student to form a true impression of the field he is in, since actual work often can tell more about an area of interest than courses can. The Office of Student Practice, headed by Prof. Sanford R. Shapley, takes an active part in helping students find jobs which satisfy practice requirements.

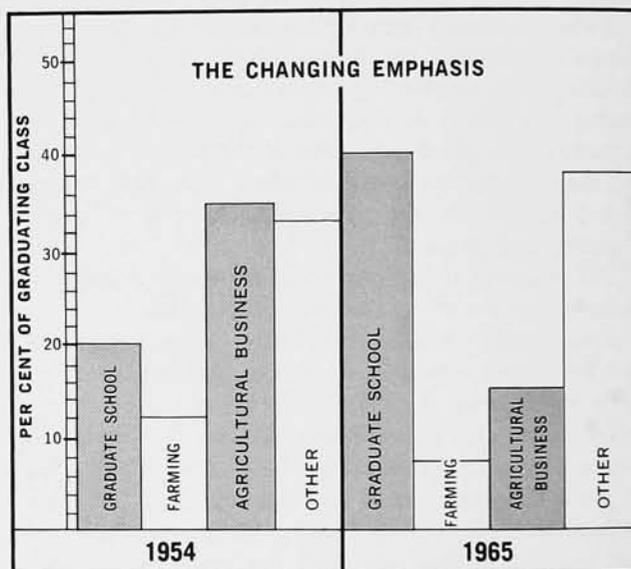
Another important factor which helps students explore different career possibilities intelligently is the availability of professional guidance and advising. The door of Prof. Howard S. Tyler, Professor in Charge of Vocational Guidance and Placement, is always open to students who need help in making a decision regarding their course of study. Honest and valuable advice is offered to any student who seeks it.

With this great freedom of choice in the College of Agriculture, the relative importance of various depart-

ments is changing from year to year. There have been major shifts in the numbers of students majoring in the various fields of study.

One great change has been the increase of students majoring in the biological sciences. In ten years the number of students majoring in the many branches of the biological sciences has increased substantially so that at the present time over twenty per cent of the students graduate in some part of this department. The percentage of students going on to graduate or professional study has been affected by this increase. Forty per cent of the 1965 graduates of the College of Agriculture went on to graduate school as compared with twenty per cent in 1954, (see chart, below). About one-half of these graduate students are studying some form of the biological sciences, making this by far the largest field of graduate study.

The increase in students going into careers involving



the world of science has been coupled with a decrease in those going into farming and agricultural business. Eleven per cent of the graduating class of 1954 went into farming and 35 per cent entered the field of agricultural business. In 1965 seven per cent started farming and 14 per cent took positions in some kind of agricultural business. On the other hand, the departments of Business and Public Administration and Agricultural Economics are increasing in importance, accounting for 16 per cent of agricultural students going to graduate school.

This is part of the philosophy of the College which places great emphasis on the importance of the individual and recognition of individual differences. It is more important for a student to explore and find the field of study which suits him than for him to be forced into what Prof. Howard S. Tyler calls, "A preconceived program to fit a mythical average."



An Act

To regulate interstate and foreign commerce by preventing the use of unfair or deceptive methods of packaging or labeling of certain consumer commodities distributed in such commerce, and for other purposes.

TRUTH IN PACKAGING

by JOHN SHORT '67

Back in October of 1963 the President's Consumer Advisory Council, newly created by the late John F. Kennedy, made recommendations to the administration on several subjects that concern the consumer. Among these was a proposal that legislation be enacted to prohibit various methods of deceptive labeling and packaging that consumer groups say are being practiced consciously or unconsciously by many manufacturers.

The chairman of the new Council at that time was Miss Helen G. Canoyer, dean of the College of Home Economics.

Last November 3, just about three years after these recommendations were made, Dean Canoyer was present when President Johnson signed into law the "Fair Packaging and Labeling Act."

Since that report was made, and even before then, proposed bills on this topic have been fighting their way through the complex legislative processes. The resulting law that survived the effects of these procedures is not nearly as strong as consumer groups and the administration would have liked it to have been.

What the Consumer Advisory Council and other consumer interests wanted was legislation that made mandatory several regulations regarding the labeling and packaging of consumer items so that shoppers would be able to make intelligent choices.

The Council's general feeling was that legislation that existed regarding the subject of labeling and packaging was not adequate to "cope with the confusion and deception which has come to characterize the packaging of a large proportion of the goods sold to American consumers." Existing legislation that was probably most concerned with this subject, the Food, Drug and Cosmetics Act of 1938, did not define precisely what constituted misleading and deceptive packaging and labeling. Hence the Food and Drug Administration often had difficulty in effectively enforcing this legislation.

What consumer groups have wanted therefore is a law which specifically outlines what packaging and labeling practices are deceptive and which prohibits them.

Gradual weakening of the bill from its first introduction three years ago to its final passage was necessary to partially satisfy the powerful forces which opposed the bill. These forces included almost every manufacturer and advertiser in the country. These individuals felt that any bill would be too severe an intrusion on the marketing and promotional rights of the manufacturer, and furthermore that existing legislation was adequate to control any deceptive packaging and labeling.

But to further understand the point of view of the groups which lined up against this legislation, one must understand the role which the package itself has begun to play in the advertising of the product within. Manufacturers, who were concerned primarily with product quality and cared little about package appearance, slowly began to realize that the package itself can become an important medium for advertising the product. Consequently they have tried to attract the customers to their product by the use of distinctive and eye-catching packages. They have employed such features as package material, distinctive shapes, colors and type styles to create a package whose design will give identity to the product and enhance the public's opinion of the product's quality. Though this trend has led some manufacturers to unwittingly develop deceptive packaging, they are not going to favor any legislation which might seriously restrict their efforts to create a distinctive package design which will help sell their product.

A compromise was finally reached on a bill which requires declaration of net contents in a way that can easily be seen, outlaws the use of such terms as "jumbo" and "giant" that exaggerate the quantity within the package, permits the regulation of cents-off promotions, requires manufacturers that state the number of servings in their packages to give the net contents of each serving, and gives the Food and Drug Administration authority to forbid a manufacturer from placing his product in a container which includes an unnecessary amount of packaging material or air space.

Dean Canoyer pointed out that though the final bill may not be as "effective as the original proposals, this initial packaging and labeling law may open the door for stronger consumer legislation in the future."

Extension's Changing Image

by JOAN SOLOMON '67 and
CHARLES WILSON '69

"To teach all of those things that are necessary for fuller and richer family living in the farm, in the home, and in the community – that is EXTENSION."

The philosophy of the extension service remains the same. But the fast-moving pace of today's world requires changes in its methods, its organization, and its techniques for communication. Information must come quicker and it must be more complete, for farmers, youth, and homemakers across the state have new and increasingly complex needs.

A "task force" recently completed a study of extension's role in commercial agricultural production. Recommendations for changes in the system were then drawn up into a formal report. Since commercial agriculture is being carried on in a dynamic social and technical environment, it is necessary that cooperative extension keep pace with the changes.

The report called for important organizational changes. There are presently extension agents in each of 56 counties. Each county is responsible for its own organization. The report proposes that all work be done by teams of agents rather than by individuals. A team of three or four agents would work in an area encompassing several counties, thus decreasing to 20 the number of areas in the state. This system would allow extension agents to take specialized roles. For example one agent in an area would be responsible for agricultural technology, another for farm management, and a third for the prevalent type of farming, whether it be dairy, fruit, or grains.

The decision whether or not to undertake these changes is up to each county. At this time most of them seem quite receptive to the ideas. The new system will go into effect this month in an area containing the counties of Herkimer, Fulton, Montgomery, and Schoharie.

John C. Swan, assistant director of extension at Cornell University and chairman of the task force which carried on the study, notes that the farmers of New York State are very interested in this program. Mr. Swan attributes this interest to the fact that now "better-trained people



with more depth of education in their particular field" can give aid to commercial agriculture.

There have also been recommendations for change in the extension staff at the university. The proposal is that the staff be divided into interdepartmental teams, each with a team leader who is to be chairman of meetings and organized activities. The teams would sponsor educational conferences and training programs.

Change has also swept through the 4-H club part of the extension service. Several new programs have been designed for club members, such as automobile safety and control, child care, money management, electrical control, and dog care and training. It is hoped that these will appeal to the growing numbers of rural non-farm and suburban youths who are involved in 4-H.

An important recent development has been the attempt to reach youths who are not enrolled in local 4-H clubs. In 1965, 40,000 of these youths, in addition to 84,000

Buffalo street-gang leaders working in a 4-H tool shop.



enrolled members, participated in several in-depth projects. A popular one has been the incubation and embryology program which is presented by the science teachers in public schools. The children witness the growth of a live chick embryo from its early development until the chick pecks its way out of the shell. An assistant director of extension, Wilbur F. Pease, is very enthusiastic about this program, for it "gives students the opportunity to see biology in action, rather than to just read about it in a textbook."

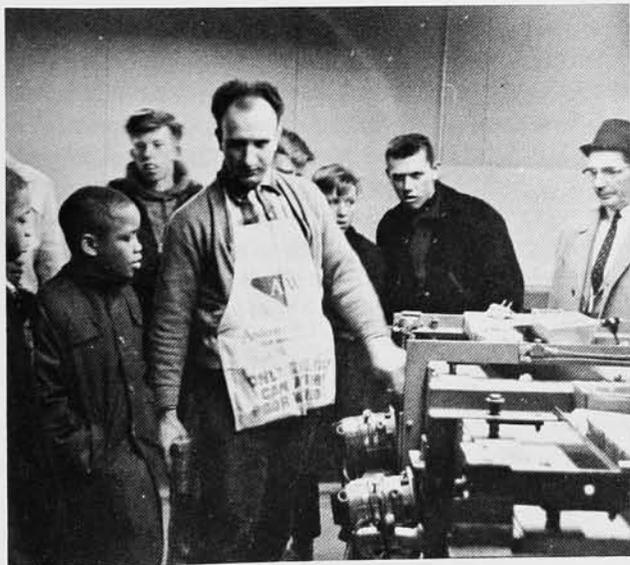
Disadvantaged youths are now also being served by the 4-H clubs. In Syracuse and Buffalo, 2300 low-income boys and girls are involved in the action demonstration program. One of the major functions of this program is to introduce these youths to job opportunities.

The 4-H program has begun to emphasize the scientific method of inquiry. An important goal is to help the youth understand and appreciate the place of science in our lives. Prof. Nancy Conklyn, head of a "Textiles for Teens" program, stressed the chemical research necessary for the development of the new synthetic fibers. A "Wonders of Food" project explained the scientific aspects of nutrition. Why does increasing temperature affect foods in a certain way? What happens when bread is being leavened?

Various organizational changes have added to the effectiveness of 4-H. These include multiple leadership for local 4-H clubs, the delegation of much of the responsibility for teaching to experts from the community, and the use of area leaders to recruit youth and to help new clubs get started.

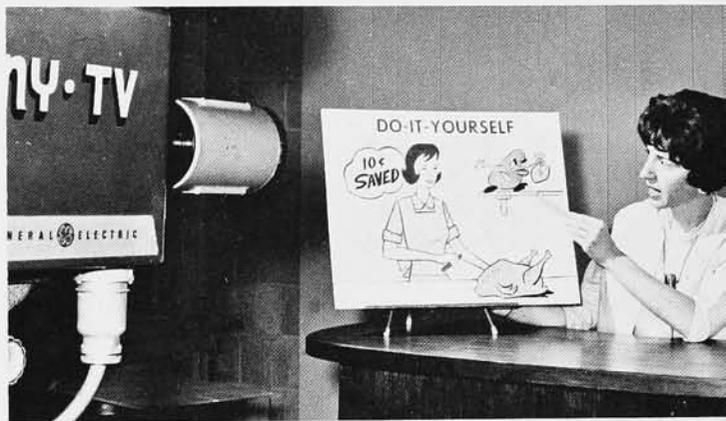
Home Economics is the third major field in the coop-

Underprivileged youngsters touring a print shop as part of a 4-H program in career information.



erative extension service. It has traditionally handled information on consumer education, nutrition, housing and home furnishing, child development and family relationships, and textiles and clothing. Though the subjects covered are the same, the information is now being administered in new and more comprehensive ways.

In the past, extension work was carried on chiefly by home demonstration units — groups of organized homemakers in the community. The role of these units was studied by an ad hoc committee. It was decided that the tie between the extension program of the New York State College of Home Economics at Cornell and the home demonstration groups should be cut. The units would



A home economics extension agent making use of one of the newest tools for conveying information — television.

change their names, perhaps to Home Economics Clubs, and would be free to accept their materials from any source.

Meanwhile, extension information would become available to other special interest groups and to interested individuals. PTA's, child study groups, and service groups would all have access to cooperative extension's resources. According to Mrs. Carolyn Boegly, an extension worker at Cornell University, the program is "branching out to meet any and all audiences."

The cooperative extension service is finding new ways to get its ideas across. Methods now include radio programs, exhibits, newspaper and magazine columns, and participation in group meetings.

The biggest opportunity presently being exploited is in television. Mrs. Boegly speaks of "the tremendous potential in television. Not only can television create an awareness, but it can be used to actually teach the techniques."

Thus, in recent years there have been sweeping changes occurring in cooperative extension. But even more dramatic innovations lie just beyond the horizon.

FORESIGHT AND FUTURE

The Recommendations of a Cornell Presidential Committee

by JERRYANNE TABER '67

Foresight and Future – indispensable elements of a competent educational program today. They reflect the vast need for constant development, constant adjustment, and readjustment, and an unrelenting investment in man's most challenging world – the world of learning.

Foresight and future were also the key elements in the recent study of the New York State College of Agriculture at Cornell by a special Presidential Committee. This committee, composed of 12 Cornell faculty members and chaired by Head of the Entomology and Limnology Department David Pimentel, has probed, studied and evaluated the role of the College in the context of present day requirements and potential demands of the future. What is it? What is it doing? What should it do? How? The institution has submitted to a form of self-analysis in order to blaze a trail for self improvement.

The process of introspection has been deliberate and thorough. The committee's first step was to educate itself in the "breadth and depth of programs and problems within the College." Members read, listened and discussed. They reviewed history – of Cornell and agriculture; they reviewed previous studies of similar schools. The final resource network included books, reports, position papers of college deans and directors, discussions and correspondence with faculty and students as well as with external consultants.

Another initial step in the committee's undertaking was to identify the purpose for the College of Agriculture's existence. The most satisfactory answer was found in the goals prescribed for a land grant institution, a category in which the College belongs. The land grant institution is responsible for: educating leaders, advancing knowledge, and translating information into action. In the college perspective these aspects stand for instruction, research, and extension, all of which are emphasized in the College at Cornell. It was on the basis of these three objectives that the committee evaluated existent programs. And it was on the basis of these evaluations that the committee recommended continuation or modification of present policies to best fulfill the prescribed goals.

One of the primary concerns of the committee, naturally, was to view the workings of the College in relation to a rapidly changing world. Agriculture today is not what it was 100 years ago, even five years ago. Nor

is society. Major issues of an educational institution, such as the quality of instruction, curriculum offered, research programs, or extension organization, must all be assessed in terms of NOW and in terms of 25 YEARS FROM NOW.

One very evident trend of the College program is an increased emphasis upon the graduate portion of higher education. The committee felt that continuation of the increase in graduate enrollment would develop a more "professional" type student and favored this trend. In terms of the stress on specification and pressure for specialization in today's society, the direction is a favorable one. Another area of emphasis is that of transfer students. An expansion of transfer enrollment reflects the need for maintaining better quality students. Since the transfer student has had a chance to "prove himself," he runs less of a risk of failure and consequent waste of resources.

The "instruction" responsibility of the land grant institution suggests a number of concerns for study. The quality of instruction in terms of course and program format, faculty recruitment policies, admission criteria, and even an advisor program are essential factors in evaluating the "success" of the College of Agriculture. The committee feels that in its academic role the College has a commitment to provide the student with a variety of experiences. The College has an obligation to relate its program to the broader scope of the University as a whole. The integration of individual schools is a complex task. One suggestion generating from the committee's study of this inter-school coordination is that of a "University student" classification. This proposal for a common distribution requirement for the first two undergraduate years in conjunction with other colleges would allow students to take some courses directly related to their professional objectives in addition to the required core courses.

Inter-school coordination is also complicated by the inter-departmental programs like the newly introduced division of biological sciences. While the ultimate purpose of pooling resources for stronger and higher quality presentations is ideal, organizational difficulties do arise. These are attributed mainly to an absence of communication as to what courses come under what administrative

UTURE

ee on Agriculture

body, and a general confusion as to the actual constitution of such a unit. The committee suggests that "ad hoc committees and conferences dealing with mutual concerns" between departments and similar Divisions be arranged to alleviate some of the problems.

Within the College of Agriculture, itself, there are similar complications on the departmental level. Organizing and delegating course material in the most efficient and beneficial manner is a complex task. The committee's main suggestion: a possible reduction of the present 55 departments to about one-fourth the number.

Quality of instruction is highly dependent on the teacher as well as upon the subject matter. This facet of instruction was considered by the committee in light of faculty recruitment policies. Unfortunately, there is no definition as to what makes a good teacher. Yet it seems to be general knowledge as to which professors have earned this reputation. The committee's report suggests placing less emphasis on single course priority. This, in essence would mean that if a professor felt he could do a good job in a certain field then he should be allowed to try. An increased flexibility for course modifications and eliminations would provide more worthwhile courses in the long run — a stress on quality, not quantity.

Instruction quality can also be a reflection of the advisory system. A student's satisfaction with his program and the opportunity for faculty consultation about course work often enhances the potential of an "educated leader." In this instance the committee recommended periodic reviews of individual advisor effectiveness by the Office of Resident Instruction.

Research, as the road to advancing knowledge, is an essential part of the educational mechanism of the College of Agriculture. As a lifting force acting to raise the scholarly level of the faculty, research plays an integral role in the overall teaching program. However, research encompasses an immense field and can take many forms, and serve many functions.

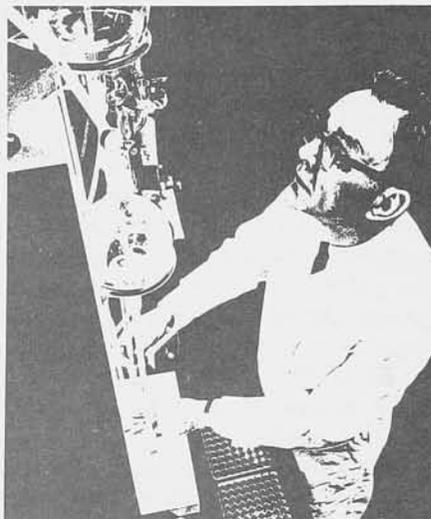
The present direction of research at Cornell seems to be toward an increased "sophistication." Efforts tend to be focused on exposing the major principles which underlie a specific problem rather than upon routine testing and adaptation. This type of approach broadens the scope of experiments and study. Problems become multifaceted.



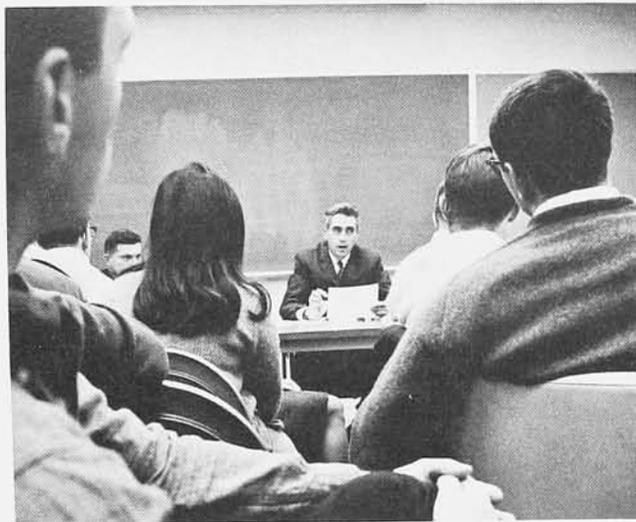
Instruction . . .



Extension . . .



Research . . .



Professor David Pimentel lecturing to a class.

They involve many areas and require many points of view on one basic task. The physicist, the geneticist and the nutritionist might be concentrating on a single problem only from different perspectives.

The subject of research efforts is another decision facing the College. Of the infinite range of phenomena which merit exploration, what areas should a land grant institution concentrate upon? The report places general emphasis on practical, contemporary problems. In accordance with efforts to adjust to a changing world, and to improve upon the status quo, research is aiming at the environmental sciences. Pollution, urbanization, and similar phenomena which inhibit harmonious existence should be the foremost concerns of researchers in the College of Agriculture, the committee suggests.

Extension work is that aspect of the College which "transforms information into action." This is the public service face of the school. Modifications of the extension program are encouraged to insure the greatest utility of resources. The trend already began in this area, and further reinforced by the committee's evaluation, is the move from "retailing" to "wholesaling" knowledge.

In the past it has been the practice of trained extension personnel to work directly through the individual in implementing action from available knowledge. Today this policy is gradually being replaced by a stronger tie between the extension professional and the intermediary, the county agent or leader. In this way the trained worker is able to reach more people by more effective use of his time. Thus, his talents and skills produce more extensive results.

The increased sophistication of research also correlates to the extension branch of the College's responsibility. The extension program provides an opportunity to apply the basic principles stemming from the sophisticated re-

search by adapting them to specific crops, animals, and community situations. The public is able to witness transformation of theory into reality.

These three basic units of the College of Agriculture are, of necessity, closely interrelated. This is clearly exemplified in the phase of international agriculture. Its primary objective to train foreign and native students for developing agriculture at home and abroad is an extension of the "educating leaders" purpose. At the same time the experience and experimentation pursued by faculty in this area adds to the over-all quality of instruction as well as benefitting research. The costs and manpower are further justified by international agriculture's contribution to the world picture as a decisive element in promoting world peace.

The committee was also concerned with the present name of the College of Agriculture. Does it really reflect the intent and scope of the institution. Strong support for a new name of "State University College of Agriculture and Environmental Sciences" reflects the influence of trends to meet present day challenges and those foreseen for the future.

Even further evidence of the key words' — foresight and future — entrance into the committee's study is the recommendation for administrative "master plans." These five and 10 year plans would define the direction of the institution in order to "provide continuity."

Self-analysis is a tedious task, but essential for evaluating the success of an individual's integration in the world. The individual in this case has been the College of Agriculture. The special Presidential Committee for studying the College has made valuable headway in this introspection and has arrived at some very significant evaluations for the future direction of the institution. The recommendations, modifications, and appraisals formulated may be viewed as important guidelines in establishing an educational program with maximum efficiency, quality and benefit to mankind and society.

Director of Resident Instruction, Herbert L. Everett, Prof. Pimentel, and the author discuss the committee's report.





GRADUATE GRANTS



by IRA LIPSKY '69

In the 1964-1965 academic year, approximately 2300 of the 2600 graduate students at Cornell received some form of financial aid. Competition for these awards is intense, as witnessed by the fact that of the 5088 applications made for strictly Cornell fellowships last year, only 490 were accepted.

A graduate fellowship is a tax-exempt monetary gift which is to be used by a graduate student to pay for his education. The fellowship awards cover not only tuition and fees, but also make a meaningful contribution toward easing the burden of general living expenses.

The awarding of fellowships is based primarily on scholastic ability, and promise of achievement as a graduate student. When evaluating the applicant, his academic records, recommendations, and in some instances, scores attained on aptitude tests, are carefully scrutinized. Once the award is received, the holder is not required to render services to the University, nor is he committed to any future employment. However, the fellowship holder may not accept any other appointment, (such as an additional fellowship or salaried work) except under certain circumstances, and even then the action is subject to written approval from the Graduate Fellowship Board.

There are two categories of fellowships available to Cornell graduate students: 1. those awarded by Cornell on the basis of internal selection processes, and 2. those awarded by outside national or philanthropic agencies on the basis of external selection processes.

There are seven major Cornell fellowships which are under the control of the Graduate Fellowship Board. These are listed below, with the range of stipend (in addition to tuition, fees, and in some cases, dependency allowances) indicated next to the fellowship's name.

1. Cornell Andrew D. White Fellowships \$2500-\$3000
2. Cornell Graduate Fellowships \$2000
3. Cornell Graduate Teaching Fellowships \$2000 and \$2500
4. Cornell Fellowships from Special Endowments \$1000-\$2000
5. Special Temporary Industrial Fellowships \$1500-\$2500

6. Special Fellowships in Engineering . . \$2000-\$3400
7. Public Health Service Graduate Training Grants \$2400

There are also several Cornell scholarships carrying stipends of \$100 to \$800 which may or may not provide free tuition and fees, and toward that end, thirty "Tuition and Fees" scholarships are awarded annually. In addition, many private and federally supported fellowships are administered by Associate Dean Erdman of the Graduate School acting with the Fellowship Board. National Science Foundation and National Aeronautics and Space Administration Traineeships are available in a limited number of specific fields over which the University has control.

Some fellowships, have risen to national prominence, and are substantially represented in Cornell's graduate student body. Included in these are the National Science Foundation, with awards of \$2400, \$2600, and \$2800 per year, and The National Aeronautics and Space Administration Traineeships, with awards of \$2400-\$3400.

In addition to national fellowships, New York State provides several forms of financial support. The Herbert Lehman Fellowship Program is nationwide and is open to applicants from all states whose interest is in social sciences or public or international affairs, with stipends of \$4000 and \$5000. However, this fellowship may be used only in New York State institutions. New York State residents are also eligible for Regents College Teaching Fellowships, or Regents Fellowships for Doctoral Study in Arts, Science, and Engineering. The awards range from \$500 to \$2500, depending on the applicant's financial state, and may be continued for four years. Associated with the Regents program is a New York State Scholar Incentive Payment, whereby every resident who applies, and is a full time graduate student, is entitled to awards of \$100 to \$300 per term the first year, and \$200 to \$400 per term thereafter.

Fellowships are the mainstay of graduate education in this country. Through the monetary support they supply, thousands of students are granted the privilege of advanced education, which might be denied them.

Liberty Hyde Bailey on Universal Service

Ruby Green Smith, in her book *"The People's Colleges,"* calls Liberty Hyde Bailey "one of the most gifted, versatile, and creative" of Cornell University's founders. A powerful influence in the early days of the New York State College of Agriculture, he served as dean from 1904 to 1913, during which time it became a state college and its faculty grew from 11 to almost 100.

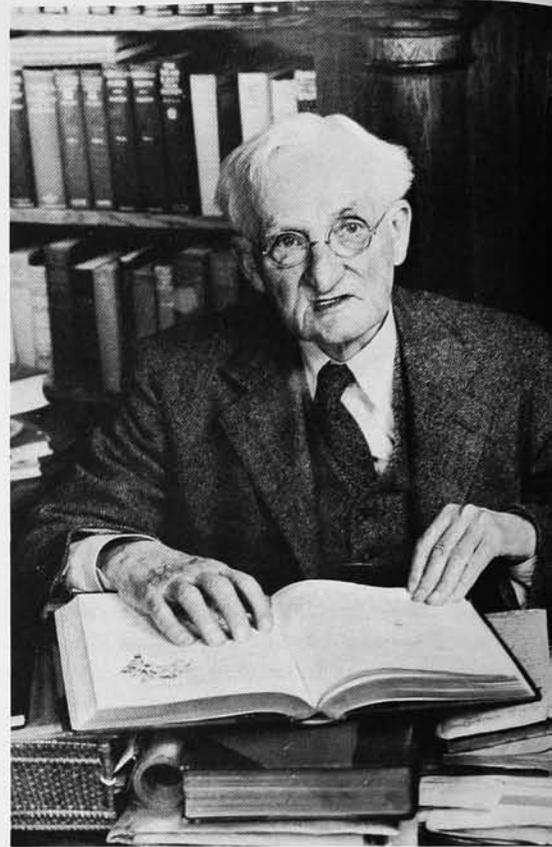
Pioneer, author, scientist, traveler, statesman, educator, lecturer, poet, and philosopher, Bailey had written well over 100 publications when he died in 1954 at the age of 97. One of his books, *Universal Service* – written in 1919 – is a poetic expression of the idea of universal service currently being discussed as a possible alternative to the draft. His views parallel those of Harris Wofford in the August 15, 1966 issue of the "Saturday Review" and Marion K. Sanders in the "New York Times Magazine" of August 7, 1966. The following are selected passages from *Universal Service* by Liberty Hyde Bailey.

Never do persons cooperate until selfishness is broken; and the organization that concentrates selfishness is more dangerous than the old insulation.

If any man is his brother's keeper he cannot delegate the responsibility. Every man and woman will give of himself and herself, or the common opinion of mankind – which at the same time is the greatest punishment and corrective – will condemn him. In the time certainly coming, if the person does not volunteer for public service he will be drafted, but the conscription, I hope, will be more universal and useful than merely the bearing of arms by males.

If a complete and continuous arming is needed to enable us to live comfortably with our neighbors, then it would seem that general military service is the only solution; and the organizing of it should be in the hands of competent military men. My plea is for universal service of some or many kinds; and if it must be military, that it may gradually evolve into something better, and more worthy of us. The military program, in such case, should be based on universal manhood service (not on childhood service) supported by universal womanhood service.

So little are we accustomed to the idea of universal service that when we use the term we think only of military



service. Or if not of that, we think of service in politics, that which the voter, party worker or office holder may render. We begin to see that there are many kinds of public service beyond the casting of a vote, services that really express the server. Never has there been so much demand for help in welfare and betterment work of every kind and description, in city and country, slum and suburb, religious and secular, industrial and literary, and in every way that a man or woman can give of himself or herself to another or to a community.

Such effort required of every person, man and woman, poor and rich, would go farther toward eliminating self-satisfaction, avarice, disregard of essential rights, enmity, pride of position, than any extent of philanthropies, charities and perfected machineries of government, or any fancy dreams of social equalities that are likely to be projected on the basis of existing classes.

The reason for military preparedness lies in accepting mankind as it now exists. One may approve such preparedness and desire it without accepting it in essence. The element of public service that runs through it is its most hopeful quality. The physical discipline is good, as also the development in the individual of habits of regularity, response, promptness, obedience and punctuality; the health of those under military discipline also improves.

“Universal voluntary service is the basis of mature democracy”

— L. H. Bailey

We should find a way to carry these habits and the good results into other kinds of service.

Any effective military training in schools, as elsewhere, must visualize an external enemy. The way to peace and the way to war are not to be taught together.

The public-service training of children should be by other means. They should be trained in cooperations, without thought of antagonisms. We must now think of other and more fundamental service than that expressed in the bearing of arms.

A people that desires only the arts of peace and that does not invite aggression or go forth to conquest, does not need to impress the military spirit into the minds of the young; we need adult preparation for emergencies, rather than a military civilization founded in the educational system.

The preparedness we seek is much more than the training and organizing of men to bear arms. The highly trained experts in many of the sciences and arts are essential to any success in war, — they are worth as much as dreadnaughts and flying corps, — as also the saving and best use of all the resources of the earth, the outputs of the factories, the mobilizing of industries, the preparation of workers, and the yields of the forests and farms; these ranges are well within the foreview of the public schools, whether the eventuality be by war or by peace.

The public schools constitute an arm of governance as well as an agency of education. We are to look to the school systems, more than to any other official force or agency, to develop the feeling for service. To this end they must be of the spirit as well as of the subject-matter; and here is their greatest likelihood of failure.

Not of all persons will be required the same duty. What one is, that shall one give. Society will learn of every man and woman what these gifts may be. Some day it will be expected that every able person will report himself, at determined occasions, for definite service, without pay, in one or more of the following:

1. *To clean up the earth and to keep it sweet — streets,*

roads, paths, byways, vacant lots, stream banks, woods, fields, and all open or public properties and public works.

2. *To take part in the construction of halls and premises for community activities.*

3. *To aid in the making of beautiful and public places accessible, and to protect them. . . . Such reservations are not really public until the people volunteer to help in them.*

4. *To demand the freedom of the earth for its inhabitants, under proper recognition of vested rights. . . . We must have the open door to fields and shores, to commanding hills that should not be exclusive property; find trails and walks and avenues to places the people ought to know.*

5. *To protect the products of the earth; and to protect the earth itself. The products to which I now refer are those not the property of individuals, — the birds, the beasts, the fish, the vegetation*

6. *To keep the public health, — to protect it by keeping one's body well, by taking care to commit no nuisance, to contaminate no source of public supplies, and to lend oneself to participate in the correcting of abuses. . . . We shall train the sound to care for the unsound.*

7. *To come with personal succor as well as with money and goods in time of flood and disaster, to visit the sick and the afflicted, to relieve the poor and unfortunate.*

8. *To respond promptly to the call of societies or groups that act in the public interest; to participate in the many neighborhood cooperations.*

9. *In general, to contribute to the public welfare, to the furtherance of law and order, to the support of government. In great emergencies, conscription should be supported: it is right. War itself presses everybody into selfless service.*

I do not speak of missionary work, which is a special field and a profession in itself; I am discussing the ways in which the citizen may express himself while still following his vocation.

What may be the opportunity to express oneself in the public interest, I do not know; but at least one may be ready, and I would stimulate the desire. Here is the beginning of universal service: the hope of humanity lies in universal service.

COUNTRYMAN CAPSULES

"Research in agriculture was originally intended to help farmers, but it serves every person in the nation and has touched the entire economy of this and other lands, and will continue to do so. With computers, this research can increase and be properly guided," said George L. Mehren, assistant secretary of agriculture, speaking to scientists from the northeast attending the New York State College of Agriculture's conference on "Computers in Agriculture."

He said that American industry and federal and state appropriations for agricultural research totaled \$833 million or two-and-one-half per cent of annual farm production. "Expanded research is needed in agriculture, not only because surpluses are running out, but to maintain and enhance efficiency of agriculture in the United States, and to try to help poorer nations to help themselves." Mehren felt that computers could consolidate and coordinate the research, making it available faster than is now possible.

■

Photosynthesis, the process by which plant cells use sunlight to change water and carbon dioxide into life-sustaining chemical substances, has been found to vary markedly from plant to plant of the same variety and from variety to variety of corn.

After two years of intensive investigation as a part of the University of the Philippines-Cornell Graduate Education Program at the University of the Philippines' College of Agriculture at Los Banos, Prof. Robert B. Musgrave, crop scientist at the New York State College of Agriculture, found that yield does not always correspond to the rate of photosynthesis. Rather, it also may depend on plant respiration, which essentially controls the food consumption as well as storage (yield) in plants. The key that unlocks the secret of photosynthesis will also open the door to new varieties of corn with higher yields.

Mechanical harvesting of cauliflower and broccoli and increased seed supply may be possible, reports research associate Sidki Sadki, Prof. J. L. Ozbun of the vegetable crops department, and Miguel Fontes, a graduate student, all of the New York State College of Agriculture at Cornell.

Studies of the effect of temperature on cauliflower and broccoli and the chemical changes in cauliflower tips, may make all cauliflower and broccoli plants mature at the same time. This would eliminate the present costly method of picking by hand with many trips made to harvest each plant as it develops.

The researchers found that cauliflower plants require a temperature of 42 degrees F for several weeks before flowering occurs. All broccoli plants of five weeks or older flowered and formed heads after a three-week treatment at 40 degrees F.

■

The years have seen specialization in agriculture increase to the point that the few are feeding the many. This does not mean that a decrease in size means a decrease in importance. Quite the contrary. At the present, every one out of three workers in the state is connected with "farming" and the farm income now tops \$1 billion a year.

Today's farmers are nothing like those of 150 years ago who grew only enough to meet their own needs. The major factors in the changed face of agriculture are: Research, done by large companies and agricultural colleges at a cost too great for one person to afford; Extension work, carrying the research from the scientist to the farmer; Machinery, to ease the farmers task and to speed the planting and harvesting of crops; and the growth of non-farm markets, to get food to the consumer and reward to the farmer.

The vastness of American agriculture can be measured by its capital investment totaling \$250 billion, an amount equal to three-fifths of the value of all the stocks listed on the New York Stock Exchange.

ALUMNI

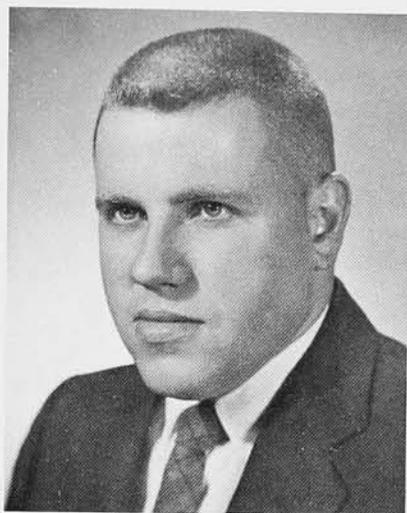
ROBERT A. BETZLER, '61, Interlaken, New York, has been a Junior High School science teacher at the Interlaken Central School since he received his Masters in Education in 1963.

HARLO P. BEALE, '19, 222 Ridge-dale Rd., Ithaca, New York, now retired, worked for Agway, ending as Associate Director of Research. His son, Harlo Beale Jr. graduated with the class of '50.

ROLF JESINGER, '65, P.O. Box 284, Shelburne, Vermont, is at the University of Vermont, Burlington, Vermont, working towards a Master of Science in Horticulture in the department of Plant and Soil Science. Apart from those activities and interests that are associated with his work, Mr. Jesinger enjoys reading, photography, and travel.

ERIE J. MILLER JR., '46, 1152 Danby Rd., Ithaca, New York, is the wrestling coach at Cornell and the minister of the Caroline Valley Federation Church. His hobbies include his farm, horses, and bees.

PAUL C. MARCUS, '59, 3957 Gouverneur Ave., New York 63, New York, is the assistant sales manager of the Idle Wild Farms, Incorporated, Pomfret Center, Connecticut. He received his Masters in Economics and Marketing at Cornell in 1960. He later worked for Lever Brothers Company in the food division. Continuing with his hockey since school, Mr. Marcus plays Senior League competition.



George L. Casler

GEORGE L. CASLER, '50, 112 Christopher Circle, Ithaca, New York, is presently an Assistant Professor of Agricultural Economics (see picture). After graduating, he received his Masters and Ph.D. at Cornell and Purdue respectively.

ROBERT J. SCHMIDT, Windy Hill Hospital Station, Binghamton, New York, is currently the director of Terminals and Distribution Services for the Endicott Johnson Corporation, Endicott, New York. He was the former manager of distribution at the General Aniline and Film Corporation in the Photography and Reproduction Division.

Aside from his interest in local civic organizations and national organizations, Mr. Schmidt enjoys hunting, fishing and reading.

FORREST B. WRIGHT, '22, 1054 Cayuga Heights Rd., Ithaca, New York, now in retirement, was a professor of Agricultural Engineering at Cornell. He received his Masters and Ph.D. at Cornell and did a one year post Doctorate at the University of California, Berkeley, California. Paul Wright, his son, graduated with the class of '53.

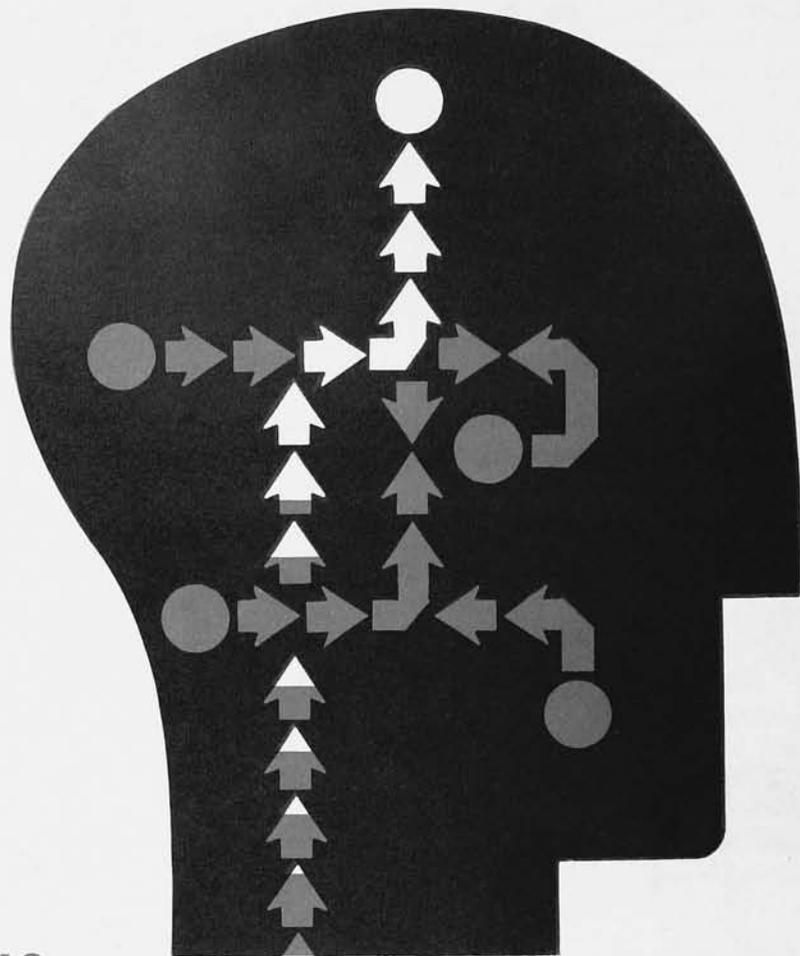
VIRGINIA W. SCHLEICH, '61, Rockefeller University, New York, is currently employed in a laboratory at the University. Her husband, Thomas Schleich is also there working on his Ph.D. thesis. At ease in the outdoors, both are keenly interested in skiing, fold-boating and camping.

LEWIS E. KOLAR, '63, Swart Street, Margaretville, New York, is now the assistant Vice President and branch manager of a bank in his town. His major interest is in the Rotary Club.

PICTURE CREDITS

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A Mysterious Process

The creation of leaders is a mysterious process, combining effects of personality, background, education, and opportunity. In the case of one Empire State agricultural leader after another, the education was provided, at least in part, by the New York State College of Agriculture at Cornell University.

From its beginning, the College has trained people who went on to lead the State's agricultural industry and provided leaders for other states and foreign countries as well.

Since 1873, when Cornell granted its first two Bachelor of Science in Agriculture degrees, 13,526 students have received that degree — almost one-fifth of all baccalaureate degrees awarded by CORNELL.

As agriculture has changed, so have the roles played by the College's graduates. Today, large numbers are in business and research. A small number — less than a tenth of each graduating class — enter farming, but many of those who do are among New York's most productive farmers.

More than 500 careers are open to graduates whose education emphasized agriculture and the number and variety will increase as modern agriculture and areas related to it continue to grow.

8/c

CORNELL COUNTRYMAN

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FEBRUARY, 1967

NO. 5

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ON THE COVER

The little rascal we see would seem to hold our immediate fate in his paws. This is the month the groundhog will come out of his seclusion to look for his shadow. If he sees it, we're in for six more weeks of winter!

IN THIS ISSUE:

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CORNELL COUNTRYMAN FEBRUARY 1967 / VOL. LXIV — NUMBER 5

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Former Countryman Editor Cited:

Mademoiselle Merit Award . . 1966

A small package was launched at James Madison High School in Brooklyn in 1958, and it went into orbit on the Cornell campus that September with all the potential of a telestar. It was labeled Jane Ellen Brody. Mission: to conquer the field of science; bending it to her will and verbal skill.

Biological and physical science courses were dispatched with marks of 90 or above and no longer provided challenges longed for. People were more complex than science, and with all systems "go" Miss Brody set out to conquer homo sapiens as well.

She needed a display case for her talents, and the *Cornell Countryman* needed staff, so a "contract" was drawn. Her ability to ferret out information among the scientists in the New York State College of Agriculture, coupled with her desire to translate and interpret this science for the lay reader, resulted in three Paul H. Guldin Memorial Awards for articles carrying her by-line. She moved on into the associate editor's chair in her junior year and became editor-in-chief of the publication in 1961-62.

The warmth of a galloping chuckle which started down around the knee-caps helped to soften the blow of the mailed fist as she drove her staff on to greater accomplishments. Determined womanhood never came in a smaller, neater, nor more professional package. Her diminutive form made it easier to penetrate administrative barriers and snip the red tape with finesse.

Meanwhile, academics kept pace. She maintained a cumulative average of 89.7, graduating with distinction in the class of 1962. She was tapped for Mortarboard, national senior women's honorary, for which she served as secretary, and to prove her versatility was chosen for associate membership in Ho-nun-de-kah, senior men's honorary. She was a member of Phi Sigma Sigma sorority.

Realizing a great need for writers who could interpret science, Jane looked around for a graduate school which would provide her with a master's degree and a science writing fellowship. The University of Wisconsin's School of Journalism had the answer. They also assigned her as a reporter for the Medical School through the University News Bureau.

After receiving her masters, Jane joined the Minneapolis (Minn.) *Tribune*, whose science writer, Victor Cohn ("a very talented man and a wonderful counselor") provided her with encouragement and criticism. She worked on the general assignment beat for the *Tribune*, covering everything from crime to theology, "always trying to worm my way into the science field. But extensive science reporting is restricted to the larger metropolitan newspapers — I really couldn't get enough of it there. However, getting that experience was the best move I ever made."

JOURNALISM:
JANE ELLEN
BRODY

MADEMOISELLE
MERIT AWARDS
1966



"The most important thing about going into a specialized field is to have a thorough educational and vocational background. There is always room in the specialties for a qualified person." Petite, 25-year-old Brooklynite Jane Ellen Brody, a science reporter for *The New York Times*, speaks from experience, although the intense preparation she received in two diverse fields happened purely by chance. Jane majored in biochemistry at Cornell University, graduating with distinction second highest in her class. During an enforced period of isolation, running a research experiment, Jane realized that "science happens very slowly—and is very lonely. I really liked people better than test tubes! Also, this kind of life was really not compatible with what I hoped would be my future role as wife and mother." Thus, when a campus agricultural magazine, the *Cornell Countryman*, needed an



Editor's note: There is always room at the top — particularly if you are petite, young and talented. The *Cornell Countryman* takes great pride in saluting one of its own *who made it* as a science writer for *The New York Times*. We also salute *Mademoiselle* for being so alert while searching for 1966 Merit Award candidates.

On a trip home to Brooklyn, Jane heard of an opening for a science writer on THE NEW YORK TIMES. At the urging of her father, Cornell '31, she went for what she assumed would be a short routine interview. At the end of the day, Jane had a job!

Jane finds working at the *Times* a challenge. "Many of the staff are quite young, and it's a surprisingly relaxed atmosphere. With the *Time's* reputation behind me, I find it easy to obtain information. But writing the articles can be hard — because they *must* be well written, and I feel compelled to get everything right — both facts and implications without bias."

"I do all my own research, mostly from science journals, wire services, and releases. Something particularly interesting I show to the science news co-ordinator for his O.K. Then I do my interviewing and write the story. Cancer stories get the most checking."

Jane has just returned from Tokyo, where she covered the Ninth International Cancer Congress.

Recently married to Richard Engquist, also a writer and editor, she and her husband spent their honeymoon searching for additions to their collection of antique copperware.

Soil Specialist . . .

From Viet Nam to Cornell

by EMILY MILLER '69

In the last ten years, Matthew Drosdoff has stirred the soil in such diverse spots as Viet Nam, Peru, and Washington, D.C. Today, he is in Ithaca, New York — a new addition to the agronomy faculty.

Professor Drosdoff, a soil scientist by profession, worked as a researcher for the U.S. Department of Agriculture until 1955 when he transferred to the International Cooperation Administration, now the Agency for International Development, a semi-autonomous agency of the State Department for technical assistance abroad. For five years he was soil advisor to the Peruvian government, from which he went on to advise in Viet Nam for three and one half years. In February, 1964, he returned to our nation's capitol to be the first administrator of the International Agricultural Development Service of the U.S. Department of Agriculture. He came to Cornell as a professor on December 1, 1966.

Dr. Drosdoff presenting awards to staff at U.S. Department of Agriculture awards ceremony in Washington, D.C.



With the increased need for agricultural specialists to work overseas in developing nations, as well as an opportunity to train the large number of foreign students who flock to this campus, Cornell has been developing programs in International Agriculture in which the field of tropical soils is an important segment.

Although basic agricultural principles may be applied to any environment, many foreign students, along with those from the U.S. aspiring to work overseas, need special training in agriculture "related to specific environments." Many of these environments are tropical. Since Professor Drosdoff has had extensive experience in tropical soils, he will teach a course in this field while assisting advanced degree candidates with "research work in problems directly relevant to those of tropical countries."

Working abroad has opened whole new vistas for him. His specialization in soil science has brought him into close contact with people and their problems.

"People and the land sort of go together," he says. "Soil itself doesn't have much meaning. It's got to be related to life."

Perhaps it was for this closeness between people and the land that Matthew Drosdoff embarked upon his career in agriculture. A "country boy at heart," he grew up near metropolitan Chicago. "I lived near enough to Chicago that cities didn't attract me. I guess it's a question of temperament. I preferred the wide open spaces to the confines of the asphalt jungle."

One of Professor Drosdoff's prime concerns is the increasing need for agricultural development abroad. In the last few years less developed nations have realized that they must pay attention to their agricultural sector if the country is to survive. In the past, many developing countries have focused mainly on industry and have neglected agriculture.

Two factors greatly influencing the need for improved agricultural production in the developing countries have been the population explosion and increased personal incomes. With more people to feed and more money with which to buy food, many of the world's nations have been thrown into a desperate situation.

"Although they have increased agricultural production, it hasn't kept pace with the demand," Professor Drosdoff



Dr. Drosdoff with Secretary of Agriculture Orville F. Freeman and visiting Swedish home economist leaders at an international exhibit in the patio of the U.S. Department of Agriculture.

explains. "We are concerned with the food crisis — their food problem — since many developing countries are not able to maintain adequate food production. In some countries there has been an actual decrease. Many countries subsist below what is considered a minimum diet."

Although the U.S. surplus has previously filled the gap between what these countries produce and what their demands are, Professor Drosdoff says they can no longer depend so heavily on this source of food. Now these countries must depend more on their own resources and on their own labor.

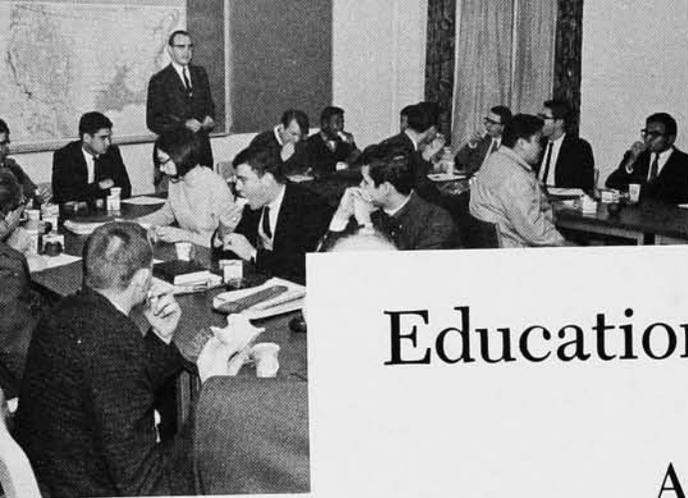
But the United States as a leader in the free world still has a responsibility to help these countries through their agricultural crisis, he contends. They should: (1) allocate more of their resources for agriculture; (2) develop agricultural institutions; (3) involve more people in vocational agriculture so they may take over the training of their own people; and (4) develop public policies and legislation to strengthen the agricultural sector.

"I don't think there's any question about the availability of physical resources to prevent widespread hunger in the world," Professor Drosdoff says. "I know much knowledge is available that could be utilized. The potential for increased agricultural production is enormous.

A limiting factor is the will and the leadership of the country. Also, many farmers in impoverished countries do not want to change. Farmers are conservative and they resist change. Their whole livelihood is so intimately tied up with what the land produces, that understandably they cannot afford to take too much risk. But if farmers can see that new techniques will encourage much greater productivity from their land, they will adopt new methods provided they have incentives and assistance. In the tropical countries there is an urgent need to accelerate agricultural research and education, as they are so far behind the temperate zone countries.

The soil scientist points out that increased production must prove worthwhile. There must be a market for the crops, as well as consumer goods to be bought with the income. The farmer must be able to initially afford the methods necessary for him to improve the cultivation of his land. These are all problems which workers will have to solve before increased production can evolve.

In the final analysis, Professor Drosdoff is optimistic. The capability is there, but the countries themselves must do more than they have done thus far to utilize it. Securing adequate food for the world's population will require a large and forceful effort by all nations.



Prof. Osborn, left, chairman, discussion of their experiences. The author takes notes as her fellow-students quickly devour the lunch so thoughtfully provided by Dean Charles E. Palm and Associate Dean W. Keith Kennedy — for whom the report is being made.

Education on Wheels

A 12-State Field Trip

by MARIA MELYNK '68

The fields of green grass blurred as the bus sped toward Ohio. On board, 28 Cornell students were heading west. Their sleeping bags and notebooks packed, they were ready for class.

Class? Yes, this is Agronomy 461, taught this year for the first time at the College of Agriculture. Agronomy 461 is more than just another new course. It introduces a rather unique method of instruction. The students don't just sit in a lecture hall and *hear* what American agriculture is about; they go out and actually *see* it.

Last summer the first group of selected undergraduate and graduate students embarked on the 21-day study trip. They gathered on the steps of Bailey Hall early on the morning of June 12 and returned on midnight July 2, three weeks and 5340 miles later. To have "first-hand knowledge of soils, crops, agriculture, agricultural institutions and agricultural industries of regions unlike the Northeast," the students traveled through 15 states and Ontario.

They visited eight campuses, eight research farms, seven commercial plants and six commercial farms, stopped 28 times to look at soil profiles, and talked with more than 100 local authorities. They visited Rocky Mountain National Park, Deadwood, the Black Hills of South Dakota, the Badlands of North Dakota, and a rodeo.

To accomplish all this, the hectic daily program had to be carefully scheduled. The days were long and exhausting, but instructive.

June 13 was a typical day on the trip. The students were on the road at 6:30 A.M., stopping for breakfast at 7:00. After breakfast, they were back on the bus, traveling for another hour. At 9:00, they stopped at a farm and observed water control practices, then were on the move again. They had lunch in Decatur, Illinois, at 11:30. Then, in rapid succession, they toured Krick Tyndall Tile

Company, reclaimed clay pit land, K-T septic system disposal fields, and managing forages for beef cattle at the Miller-Purdue farm. They saw the rebuilding of last year's tornado area and the Purdue campus and visited the Purdue agronomy farm, where dinner was served. At 10 P.M. they arrived at Urbana, Illinois, to spend the night at the Alpha Gamma Rho fraternity.

As the days passed and the bus rumbled through the corn and winter wheat regions, through Colorado, then back through the spring wheat belt and the Lake States' dairy and forest areas, the students anxiously scribbled in their notebooks. All their observations were to be the basis for discussion and assignments during the fall semester.

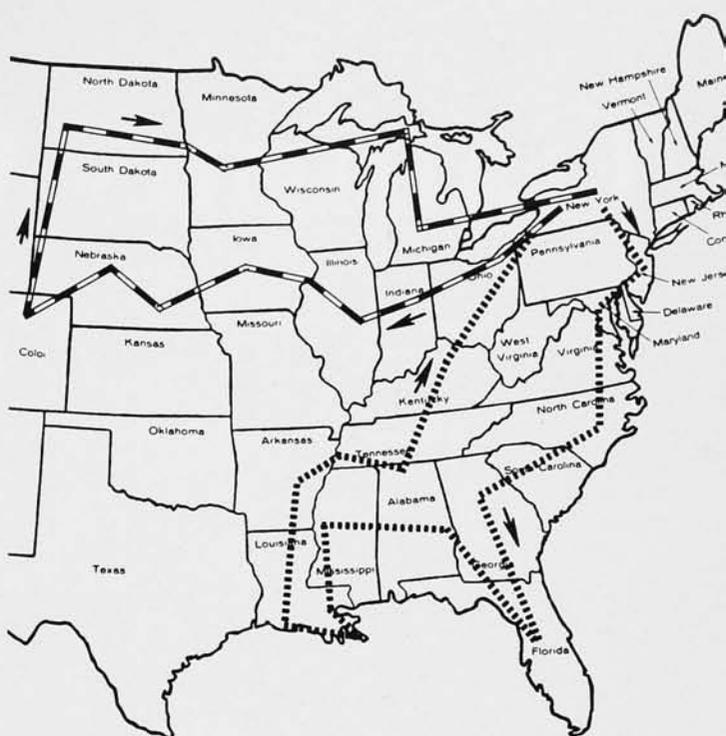
Upon their return, the students drew upon their observations to write reports on topics which determined regional deviations and local differences. For the fall term, each student chose a topic of particular interest to him, did some additional library research, and wrote an extensive report. During the year, the class meets for an hour each week, and at each seminar two students present their reports orally. The topics range from soil differences to bird varieties.

Agronomy 461 emphasizes a different kind of instruction. It offers each student an opportunity to see what he has read about. It also gives him a chance to explore his own particular field of interest. The present class, which includes 14 foreign students, represents interests ranging from Agronomy and Vegetable Crops to Extension Teaching and History.

Dr. Marlin G. Cline, head of the Agronomy Department, was the first to suggest the course. He toyed with the idea for years, but the cost of an extended field trip seemed prohibitive. When The New York Lime Association agreed to pay last summer's \$3000 bus fare, the course became a reality. Professors Murray H. Milford,

Ralph L. Obendorf and Richard W. Arnold, who are in charge of the course, carefully planned the trip to keep cost per student at a minimum. The group received many courtesy meals and each student paid only \$7 for lodging during the entire trip. According to Prof. Obendorf, \$100 per student was enough to cover all expenses. The amount actually spent ranged from \$90 to \$150. "The difference," Prof. Milford explained, "depended on how much film and other things the students bought."

At Dean Palm's invitation, the professors and students participating in the course met recently with him to evaluate it. Everyone was enthusiastic, claiming it was very successful and recommending the course for others. One student hailed it as "undoubtedly my most valuable course at Cornell." Some students complained of too much emphasis placed on soils, but Dr. Cline reminded them that, "this is a course in Agronomy," and warned against spreading it too thin. However, to better answer the variety of questions posed by students, faculty representatives from other departments may be included on future trips. On the trip through the South planned for August,



Heavy black line leading into the Midwest indicates route through the 15 states and Ontario covered by field trip in 1966. A similar study trip is being planned for the summer of 1967 for selected undergraduate and graduate students in agronomy and related fields. The dotted line through the Southeast indicates area to be studied.



Prof. Murray H. Milford, soil sciences.

Dr. W. Shaw Reid, professor of Soil Sciences and a native Mississippian, will be one of the group leaders.

Prof. Milford feels the course is "certainly very successful." And the students feel the same way, as is indicated by a problem that has arisen: what to do with those students who want to enroll in the course again. Perhaps this success and popularity will open the door for similar courses in other departments of the College.

Tour chairman Obendorf and Prof. Reid are seeking and getting cooperation with departments of agronomy and industries in the states to be visited during 1967. Of particular interest to the group will be research centering around tobacco, rice, cotton, soybeans, citrus, forestry, sugar cane, pastures, turf and soil conservation. A visit at the headquarters of the Tennessee Valley Authority will be a highlight, as will informative stops at phosphorous mines, sugar cane factories, textile mills, citrus processing plants and "black strap" molasses plant.

The new classification system for soils will be utilized where possible when the group stops at open pits or fresh cuts representative of the major soil series found in the regions to be visited.

When the students return to the campus for the fall semester it will not be unlikely that the seminar discussions may also cover such non-agricultural topics as oil drilling, rayon and turpentine manufacturing, or the problems of breweries, steel mills and paper production.

Campus Clippings

Here's a glimpse of what we've missed in days gone by . . . Recognize any of them?



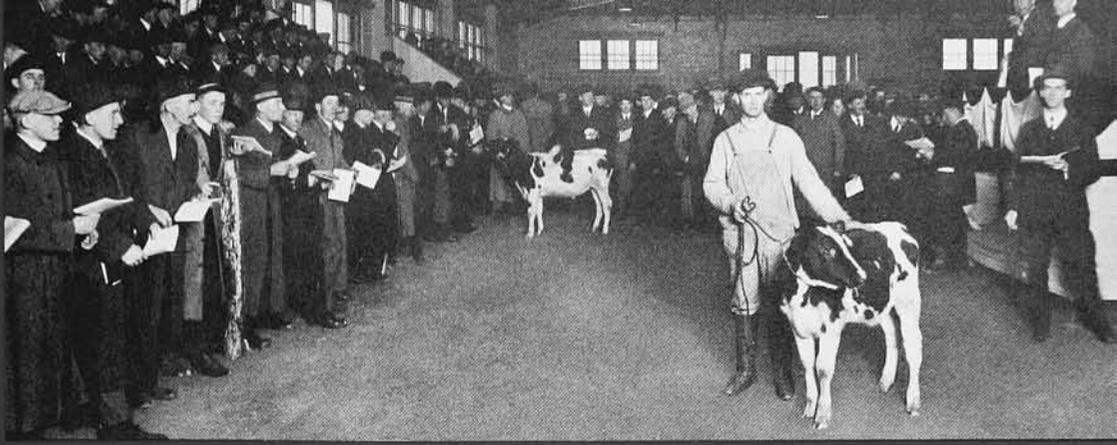
Hotel students show "Home Ecies" how it's done.



Are you sure this is the way Betty Crocker started?



That's no bull!



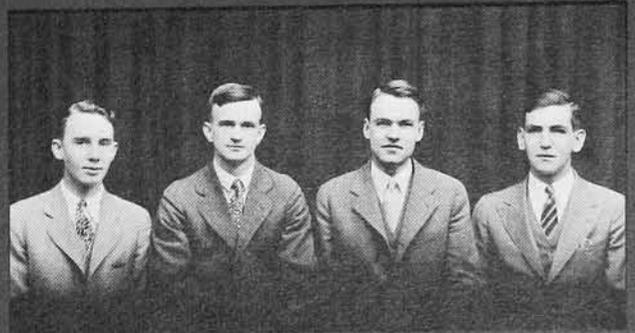
A Blast From the Past!



The Risley coeds scramble for their men on Sadie Hawkins Day, 1918.



The debating team of 1929 displays its sparkling wit and humor.



Aerial Photography

Pictures for Progress

by JERRYANNE TABER '67

To some people a photograph refers to an item which preserves memorable occasions — a concrete recollection of summer camping adventures or a family reunion.

To others a photograph is an effective way to capture the transitory — a beautiful sunset or a child's priceless smile.

To the Center for Aerial Photographic Studies at Cornell University, a photograph is a key to many doors — doors to discovery, new questions, possible answers; doors to research evidence and project guidelines.

As an "impartial recording of all the features of the earth's surface and an inference as to what is under that surface," the aerial photograph — in its few inches or few feet dimensions — embraces a reservoir of facts and information that can be employed, interpreted and applied by a wide range of human disciplines.

To a forester the aerial photograph of specific timberland might indicate the development level of various tree species, or might provide a concrete measurement of an area damaged by recent fires. To the agriculturist, the same aerial photograph might reflect different information. This field specialist views the photograph in terms of the vegetation growth correlated with soil type and fertilizer concentration. The engineer, on the other hand, might use the aerial photograph to study land contours and excavation angles before beginning construction for a new highway.

Employed by the sociologist, the aerial photograph might be essential evidence in his evaluation of the social characteristics of a given community. The location of socially significant buildings and sections — churches or business and residential sections, for instance — might reinforce his theory for social pattern and inter-community mobility. A doctor practicing in a rural village fighting a viral infection originating in the water supply might find the aerial photograph helpful in tracing the problem to its source. A picture of the area from the air would aid him in pinpointing the water supply source and watershed pattern, increasing the possibilities for eradicating the virus at the root.

The seemingly boundless range of possibilities for the use of aerial photographs as research tools has brought the importance of this field into the spotlight in recent years. The Center for Aerial Photographic Studies at Cornell, established in 1950, has, in both its teaching and research capacities, played an essential role in the development of air photo interpretation and its effective application.

As part of its instructional program, the Center offers a number of courses, basic and advanced, in aerial photographic analysis and interpretation, photogrammetry and

Before building a new highway such as that shown by the long light curve in the picture, an engineer might consult an aerial photo to determine land contours and land uses — strategic elements in his construction plans. The picture also illustrates the presence of a water control project. The river has been diverted by a dam into a smaller canal which is a source of hydro-electric power at the waterfall, seen at the base of the canal.

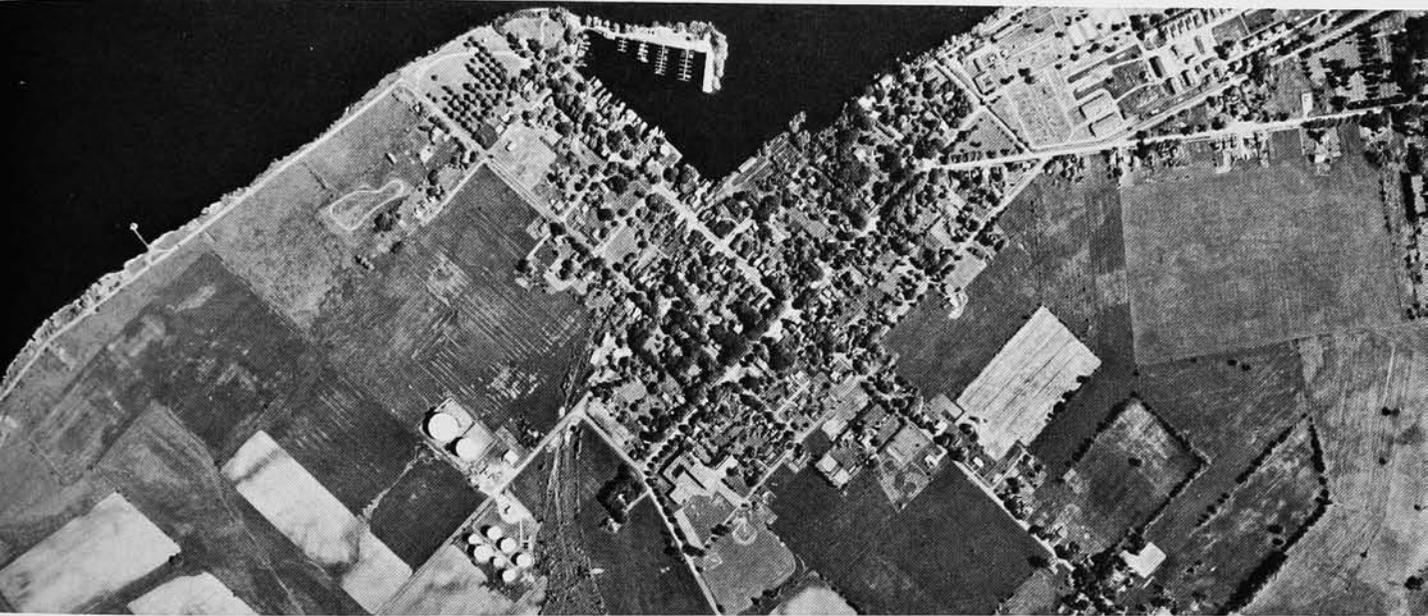


physical environment evaluation. The compilation of topographic maps which constitutes the subject of photogrammetry requires measurements and manipulation of complex instruments. Photo interpretation, however, depends primarily on one simple instrument — a pocket stereoscope — and a great deal of “brain work.” The teaching technique in the latter subject, according to the Center’s Director, Donald Belcher, is similar to the familiar assignment in chemistry of analyzing and identifying a given “unknown.”

Students of aerial photographic interpretation are given a photograph — as an unknown to analyze and classify according to prescribed steps of identification. Six fundamental “types” or elements used in this evaluation include topography, drainage patterns, erosion of land

The agriculturist might use crop intensity as his indicator, measuring the acreage of land in corn production versus forage. The engineer might be looking for evidence of slope gradients shown on the photograph by color variations and intensities or erosion patterns. An archeologist or historian might scan a photo for earth mounds or rectangular “patterns” signaling buried relics or ruins. Meaningful interpretation hinges upon accurate recognition of the indicators and upon a keen knowledge of what role they have in the total picture as well as their relation to the study’s purpose.

Realizing the expanding spectrum of the field, the Center has incorporated this attitude of “possibilities” in its activities and objectives. “The Center serves in both a multi- and an inter-disciplinary capacity instructing and



An aerial photo of an urban community carries information about the town; in this case, the power resource in its gas tanks, its harbor and fishing potential, a memorial park (left of harbor), even its historical landmark in the upper right which is actually a military depot from Revolutionary War times.

surface, color patterns, vegetation and land use. The photograph is then categorized on the basis of intensity and proportion of these elements. In order to conclude the interpretation procedure, the elements must be synthesized into some meaningful information correlated with predefined indicators — symbols for what is being measured.

While the six basic elements are identified by determined guidelines, the indicators vary with the purpose of each study or aspect of research involved. Each project is geared to different criteria. Again, the forester might study only tree tops, counting the number of evergreens or maples in a certain area.

carrying out research in the various applications of aerial photography to agriculture, engineering, city planning, geology, conservation, and natural resources inventories. Inter-disciplinary awareness is basic to each student’s training.”

Further evidence of the diversity of the field’s values is illustrated in a pamphlet compiled by the Center. Entitled “Uses of Air Photo Interpretation in the Social, Biological, and Physical Sciences,” this publication lists over 300 known applications or air photo interpretation as a research tool by professional personnel at Cornell or uses in which they expressed confidence that air photo interpretation would be helpful.

Awards Granted to Four New York "Century Farms"

Almost everyone reveres and cherishes some part of the past — a place, people, an event, an era that can never come again. For some, the threads leading back to that time are tenuous indeed. For others, those who work with the land, the building blocks of the past are real. Heritage to them is more than a word. It is the small piece of earth passed on to them by perhaps six or more generations.

In New York we call these pieces of earth "Century Farms." They are registered in Albany and have been cited by the Governor as farms that have been owned and operated by one family for at least 100 years. We even have "Two-Century Farms," and some nearing the three-century mark.

Many of them — in Eastern New York — entered family lineages in the 18th century when the land was leased from the "Lords of the Manor" who presided over their empires under the Dutch patroon system. In Central and Western New York, many of our Century Farms trace family ownership to an ancestor who was given a tract of land in the wilderness as a reward for his army service against the Iroquois.

These farms, and others not so dramatically old, but equally as valued by their owners, are a proud part of New York State's past.

At a meeting of the New York State Agricultural Society held January 11, at Albany, four families received Century Farm awards.

The four farms include:

Clarence Rea Farm, Cambridge, New York

Clarence Rea (see right) is a descendent of John Rea, Sr., who was born in Scotland in 1750 and migrated to this country in 1801. The farm passed to the Rea family when John Rea's grandson, Alexander Rea married Nancy Arnott in 1844. The farm had been purchased by James Arnott in 1789. It is now owned jointly by Clarence and his father, John Rea who still operates another farm nearby.

The present farm includes 165 acres while another 120 acres is being rented. Milk is the farm's primary product with 70 cows producing 900,000 lbs. annually. The herd includes 52 head of young stock.

Mr. Rea has served as secretary-treasurer in the Tri-County Holstein Club for the past two years.



Clarence Rea in front of a silo on his 165 acre dairy farm in Cambridge, New York.

James Cochrane, Jr. Farm, Ripley, New York

The original owner of this farm, Alexander Cochrane (see right), was the first individual land owner in Chautauqua County. In 1804 he brought his family to America from Ireland, traveled up the Hudson River, along the Mohawk River, and Lakes Ontario and Erie until reaching Chautauqua County. There Cochrane exchanged \$792 in gold for 344 acres and the first deed ever issued in the county.

Today, James Cochrane operates 240 acres of the original farm. His business includes 50 acres of bearing grapes, 100 acres of hay, 60 of corn, and 40 of wheat and rye. In addition, he owns 80 Holstein cattle and a beef herd. His son, Jack, is a sophomore in the College of Agriculture at Cornell.



James Cochrane

Wilfred Summerville Farm, Fulton, New York

The Summer- Villa Farm (see left), located in Oswego County, New York, is a 48-acre operation which has been in the Summerville family for over a century.

The original 48 acres was purchased by William H. Summerville who bought the plot with his Civil War pay. It is presently operated by William G. Summerville in partnership with his father Wilfred. The business revolves around 60 head of registered Holsteins, 1,000 Red Rock chickens, 16 acres of sugar beets, 33 acres of corn and 40 acres of hay. The dairy herd has been on test in D.H.I.A. since 1934 and has a present average of 15,000 lbs. of milk and 540 lbs. of fat. This farm had the first artificially sired calf born in Oswego County and has produced registered Holsteins since 1913. In 1966 the Grand Champion Female at the Oswego County Black and White Show was exhibited by William G. Summerville.



Wilfred H. Summerville (left), with son William G. Summerville

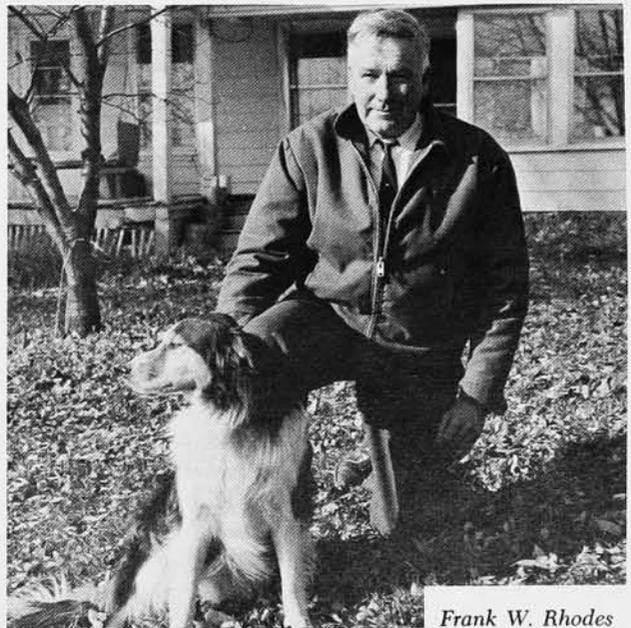
Frank W. Rhodes Farm, Elmira, New York

In 1832 this farm consisted of three adjacent farms operated by relatives. One was sold, and the other two are now run by Frank Rhodes (see right) as one unit.

The farm overlooks the Chemung River Valley and consists of 232 acres on a hill with an additional 68 acres on the river flat. It is primarily a dairy farm with some 80 head of stock that includes a normal milking herd of 46 to 50 cows. The Rhodes also maintain a flock of 150 hens.

The farm is in such a picturesque location that artists have often come to the home to paint the setting.

One of the family's most interesting activities for two generations has been with the Elmira Area Soaring Club. The family gave the club the right to pass through their land for easy access to the hills used for soaring. Mr. Rhodes himself has also tried his hand at gliding.



Frank W. Rhodes

COUNTRYMAN CAPSULES

Plants rank sixth in causes of poisoning in children under five, according to Prof. John M. Kingsbury, a botanist at the College of Agriculture. He says plants rank above polishes, waxes and tranquilizers, and are only slightly less troublesome than insecticides.

Kingsbury reported at a recent Northeastern Weed Control Conference that pesticides are usually blamed in cases of poisoning, making it difficult to determine the real culprit which may be a poisonous plant.

Kingsbury said, "Several dangerous species can be found along virtually any roadside or in any sodded pasture or woods. Many have no conspicuous feature and may be overlooked by the average observer."

At Cornell, a plant identification center is available at the L. H. Bailey Hortorium, and a 100-species collection of living poisonous plants is maintained at the Veterinary College. Among available publications are Kingsbury's book, "Deadly Harvest," and Cornell Extension Bulletin 538, "Common Poisonous Plants."



What effect does a child's upbringing have on his relations with other persons, his tendency to conform, and his capacity for self-motivated action?

These are some of the questions a group of scientists at the College of Home Economics are pursuing in a series of cross-cultural studies on child-rearing practices. The research project, which is being directed by Prof. Urie Bronfenbrenner in collaboration with Prof. Edward C. Devereux Jr., and Dr. Robert R. Rogers, research associate, is concerned primarily with studying these practices and their effects on children in the United States, England, Switzerland, West Germany, and the U.S.S.R. The group, which recently received a \$91,400 grant from the National Science Foundation to continue their work for another five years, will analyze data on hand and will gather more in Hungary, Japan, Western Europe, and the U.S.S.R.

Research results to date have indicated that the responsibility for raising children rests primarily with the family in West Germany, England, and the United States, while the U.S.S.R. and socialist nations rely substantially on groups, including peers.

Prof. Bronfenbrenner reported from his findings that social pressure can have appreciable but predictably different effects in different social systems. In connection with raising and educating children, the findings empha-

size the importance of using the power of age-mates to constructive ends in influencing the behavior and personality of the child. He said that American parents are more emotionally involved with their children than English parents are. Americans show more affection and also make greater use of psychological forms of discipline than those of other cultures studied.

In contrast, the research indicates that English parents give their children less emotional support and rely more on direct techniques of punishment such as spanking and scolding. The English also treat the two sexes differently, being especially cool and punitive with boys.

English children in the study were more peer-oriented than their American age-mates and more willing to engage in anti-social behavior.

According to the Cornell research, English and American children appear to place a high value on telling the truth and seeking intellectual understanding. Soviet children appear to place the greatest stress on overt propriety (good manners).



A series of climatological atlas bulletins climaxing 10 years of study in agricultural stations located in 12 states and utilizing modern computers is slated for publication.

The atlases which tell everything from spring and fall low-temperature probabilities to drought conditions were produced by Cornell University researchers. According to Prof. Morrille T. Vittum, head of the vegetable crops department, at the N.Y. State Agricultural Experiment Station at Geneva, they will prove valuable for making sound agricultural management decisions.



Successful and profitable computerized farm record keeping programs by banking institutions are just around the corner, according to Ralph L. Higley, vice-president of the Marine Midland Corp., Buffalo. He reported at a recent Cornell conference, that banking institutions are gradually moving into the area of computer services for agriculture with better service for the farmer and increased efficiency for all. Mr. Higley cautioned that even though the advances may at times appear dramatic, progress in gaining widespread adoption by computerized service for agricultural accounts is by no means breathtaking.

He cited the need for borrowed capital in farming over the next decade and the resulting demand for accurate and complete records.

Editor's Note: We print the following letter in hopes that others will be prompted to write as memories are jogged, or opinions jostled, by material appearing in the *Cornell Countryman* each month.

Editors, *Cornell Countryman*:

Here it is December and I have not written to you my reactions to the October issue. I doubt if it was planned to arouse memories as far back as 1904, but it did. I do not remember Andrew D. White from that angle on your cover, but I do remember him walking about the campus, quite an imposing figure with his white beard.

Then there is the sower at the top of page 1 taken from the cover of the first issue of the *Countryman* — the only issue that I never owned. Among the editorial staff I note the name of Charles Wilson. Charles S. Wilson was the first editor of the first *Cornell Countryman*.

The stories of class banquets reminds me that several members of the freshman class of 1907 were captured by the sophomores and the numerals '07 were painted on their cheeks with, I believe, silver nitrate. For weeks their faces were seared.

The next year I joined the freshmen in the old University barn — where we waited until after midnight, then made a rush for — I don't know where. On East Avenue we were met by the "sophs." Several of us were captured and taken to the Halls where we were tied to chairs hand and foot. Chester J. Hunn, '08, was near me. He had very slender hands — slipped them out of his bonds, untied one or two others, and they, using some "bluff" walked out.

How come the "Bull Fight" was not mentioned in your article? *New York Times* played it big as a disgrace to the University. Some of the bulls from the College farm were led in a parade, but the "bullfight" was a joke. Put on by Mexican or South American students in bullfighter costumes. The "bull" was a head, with horns, mounted on two wheels of a baby buggy and pushed about by one

ALUMNI

student while the others played the parts of picadors, matadors, etc.

The mention of two toboggan slides does not state that they were built side by side and on busy days, operated alternately, with an eye to having the ice clear below. One day President Schurman was entertaining Judge Alton B. Parker and took him for a ride on a toboggan. Going down soon after, I saw a derby hat on the ridge between the two slides. I put my hand out for the hat and it went flying. My group noted some searching around the base of the supporting framework, and later we learned that Judge Parker's hat was lost.

"Teefy" Crane . . . no one else had hair like his. It is a good picture of him. But of Davy I only remember approaching his desk in fear and trembling on registration days.

I hope to subscribe to the *Countryman* as long as I am able to read. I know of only two living members of my class.

Very sincerely,

Rolla VanDoren, '06
Chaumont, New York

■ ■ ■

Susan Dillmann, '65, 1002 Dryden Road, Ithaca, New York, has joined the office of College Relations serving as Editorial Assistant for *Engineering: Cornell Quarterly*. Mrs. Dillmann graduated from Cornell with a major in Communication Arts, College of Agriculture. While an undergraduate, she served as Editor of the *Cornell Countryman*. She has been employed by the Tompkins County Extension Service for the past one and one half years, where she edited the *Tompkins County Agricultural News*, and prepared news releases. Her husband, Christopher Dillmann, is a student in the Veterinary College at Cornell.

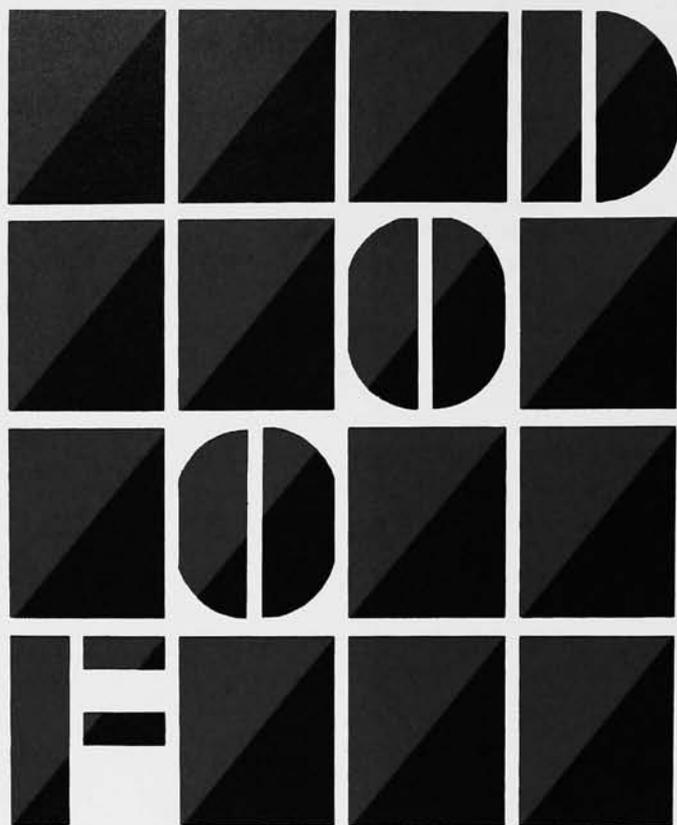
Dr. Harry R. Varney, Ph.D. Cornell, Charlotte, Vermont, was recently appointed as agricultural attache at Pretoria, South Africa. The post includes attache responsibilities to Lesotho, Botswana, Southwest Africa, and Swaziland. A native of Bristol, Vermont, Dr. Varney also holds bachelor's and master's degrees from the University of Vermont. Dr. Varney has served as dean of the School of Agriculture and director of the Experiment Station at the New Mexico College of Agriculture and Mechanic Arts. He has also served in a similar capacity at West Virginia University. His previous diplomatic experience includes attache posts in Pakistan, Sweden, and Indonesia. In Pretoria, Dr. Varney will be responsible for reports on South African agricultural production and trade. He will also direct market development activities in behalf of U.S. farm exports to the country.

■ ■ ■

Susan J. Atlas, '64, is now a graduate student in physiology and biochemistry at Rutgers. After leaving Cornell, Susan spent two years doing research at Saint Luke's Hospital in New York City. While there she worked with a unit which specialized in nutrition and metabolism — mostly of lipids. She was personally involved in research in cholesterol esterification and methods of vitamin E determination.

PICTURE CREDITS

Page 3 — Courtesy *Mademoiselle*;
pages 4, 5 — Dr. Matthew Drosdoff;
pages 6, 7 — Murray H. Milford,
James Estes; pages 8, 9, 12, 13 — New
York State College of Agriculture;
pages 10, 11 — Center for Aerial
Photographic Studies.



THOSE RISING FOOD PRICES

Each year Cornell University's Agricultural Leaders' Forum has brought an imposing array of speakers to the campus to examine subjects as varied as the Empire State itself. Statesmen, educators, administrators and spokesmen representing many interests make timely topics lively and understandable for enthusiastic audiences.

This year's Forum, starting at 10 a.m. on March 23 in Alice Statler Auditorium, should be no exception. The topic is "Rising Food Prices: Causes and Consequences."

Looking at the story behind today's headlines, speakers will survey the complex web of services and activities that moves food from the farm to the table . . . and sets a price on that food.

Issues will be discussed from the viewpoint of the boycotting housewife disturbed by rising prices and from the viewpoint of the farmer who seeks what he considers to be a fair price for his products. The food industry and its workings will be scrutinized by participants familiar with the processor-wholesaler-retailer chain.

Food and food prices are of universal interest. Yet the system responsible for them is often misunderstood. Simplifying issues and bringing about a better understanding are the Forum's goals.

You have a special invitation and we hope you will come.

81c

CORNELL COUNTRYMAN

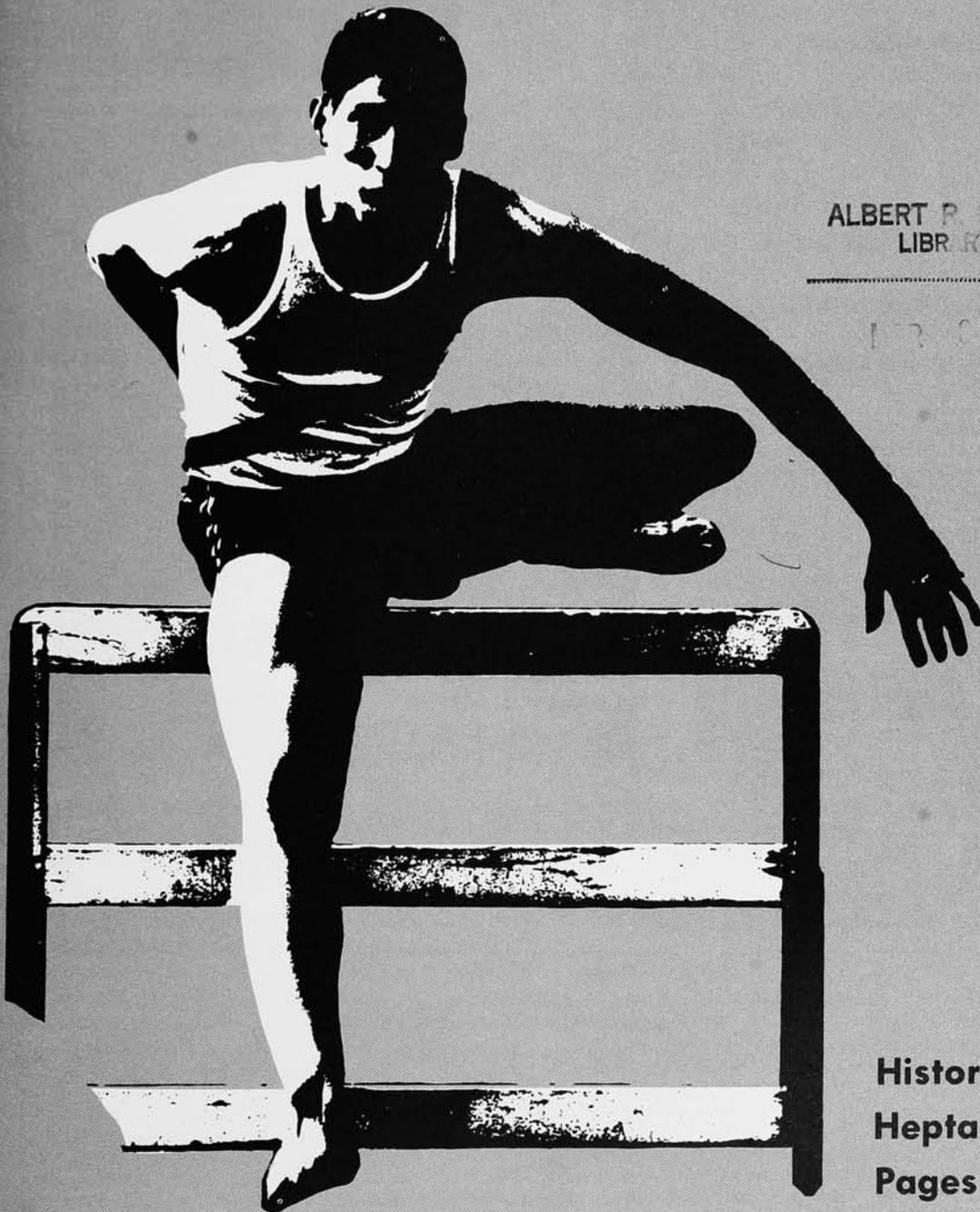
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MARCH, 1967

NO. 6

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MAR 21 1967



History of the
Heptagonals —
Pages 8-9

ON THE COVER

On March 11 of this month some 5000 fans will witness Cornell's annual track and field extravaganza. The hurdler on the cover represents one of eleven events that will take place throughout the day. An article on the history and features of this colorful sports event appears on pages 8 and 9.

IN THIS ISSUE:

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- 4 Two Research Associates
- 6 Computers in Agriculture
- 8 The Heptagonals
- 10 Agriculture in the 21st Century
- 12 Orienting the Freshmen
- 14 On the Campus 50 Years Ago Today

GULDIN AWARDS

The Guldin Awards are presented each semester to those students on the Countryman staff who have submitted articles of particular excellence for publication during that term. Three of the winners for the Fall semester, 1966 are pictured at the right. From left to right: Charles Wilson '69, honorable mention for "The Choice Is Yours," January 1967 issue; Maria Melnyk '68, 1st prize, \$75, for "The Changing Freshman," October 1966; Jerryanne Taber '67, 2nd prize, \$50, for "Foresight and Future," January 1967. Absent were Christie Merritt '67, 3rd prize, \$25; Alexander Harwood '68, honorable mention; and Emily Miller '69, honorable mention.

Editor's Note: The Memorial Awards mentioned in the February issue for Jane Ellen Brody and in the paragraph above are named for Paul Rhodes Guldin, '12.



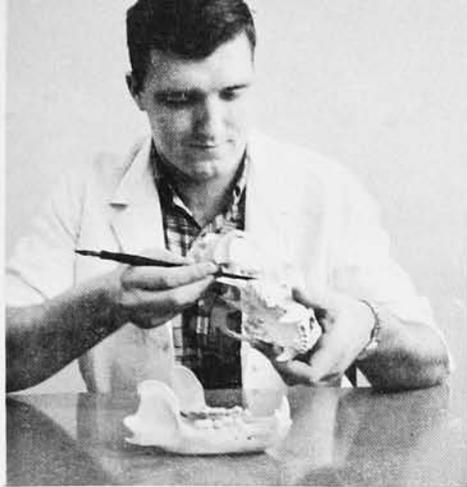
CORNELL COUNTRYMAN

MARCH 1967 / VOL. LXIV — NUMBER 6

EDITOR-IN-CHIEF: John Short, '67; **MANAGING EDITOR:** Maria Melnyk, '68

EDITORIAL STAFF — *seniors:* Bradley Berthold, Earl Conti, Gene Goldenberg, Alan Hall, Christi Merritt, Joan Solomon, Jerryanne Taber; *juniors:* Brooke Breslow, Mary Jane Ferguson, Peter Goll, Alexander Harwood, James Montanye, Gregory Morris, James Oliphant, Jane Silvermail; *sophomores:* Michael Barclay, Harold Batty, Anthony Ingraham, Phillip Langton, Ira Lipsky, Emily Miller, David Stewart, Charles Wilson; *freshmen:* Rodger Beck, Marya Dalrymple, Susan Jones, Nancy Kane, Daniel Pritchard, Gregory Robinson, Jerrold Trub.

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Curt Barry prepares an animal skull for study.

Undergraduate Research

THE CHALLENGERS

by BROOKE BRESLOW '68

The "challengers," are creative, enterprising undergraduates in the New York State College of Agriculture at Cornell. They are exploring new fields in the various departments of the college through an autonomous undergraduate research program. The program is attracting the attention of more and more ambitious and interested students. Undergraduates are currently involved in research projects in genetics, microbiology, animal physiology, biochemistry, and rural sociology as well as other departments in the college.

In most cases students receive credit, varying from one to five hours per semester for their work. Each undergraduate is usually involved with the work of only one professor to whom he is responsible. The undergraduate research program is expanding, but how does a student get involved in the program?

Fred Curtis (Curt) Barry, a junior interested in science writing, was enrolled last year in a course in vertebrate zoology. During the semester, he found a problem toward which he wanted to direct his attention, that of preparing animal skulls and skeletons for study. The process for preparing these animals was costly, time-consuming and often inefficient. Furthermore, Curt wanted to find a technique that could be easily used by individuals without elaborate facilities. His goal was to create a process that could be easily used by high school teachers.

During his research, Curt investigated one of the more complex methods of cleaning animal skeletons. In this technique, domestic beetles are used to digest the animals' proteins. But this process is costly and inefficient. It sometimes takes as long as two months for the beetles to clean the skeleton of a dog. And if the meat were to spoil, Curt found that the beetles might not even continue their job. There was, however, an idea that intrigued him. Why not use the digestive enzymes of certain decay-producing bacteria? He found the amount of certain enzymes, pepsin and trypsin, needed to digest a specified

amount of meat. But ordering these enzymes from chemical supply houses was too costly for his purposes. Curt therefore tried the raw enzymes which sold at a much more reasonable price.

The process that he has spent months developing worked well on the skeletons of small animals. However, it was ineffective on large skeletons. Eventually he discovered that the enzymes used did not digest the gelatin-like proteins which cover the bones in larger vertebrates. It was possible, through a boiling process, to remove this protein. However, the boiling process was detrimental because it loosened the structures holding the bones in place. Another problem was that Curt had no preparative processes to speed either the acid or the enzyme action. After more research and experimentation, he found that for smaller skeletons, freezing in dry ice, and for larger skeletons, freezing with nitrogen gas sufficed as adequate preparation.

Curt is still at work on his project. He is testing and re-testing to find the best combinations for the most efficient, the cheapest, and the easiest application of the process. When his work is complete, the *Journal of Mammalogy* hopes to publish a paper outlining his findings.

The undergraduate research program is designed for those students with interest and initiative. It is a program that is rapidly expanding. Prof. Harold Capener, head of the Department of Rural Sociology, cited the presence of a large number of graduate students on campus as a reason for the increased interest in research.

The students who accept the challenge of a research project of their own learn from both their failures and their successes. They are spurred on to new fields of interest through their own experiments. Even though Curt Barry's project involving the preparation of animal skeletons is not finished, he is now actively considering his next endeavor in the undergraduate research program.

Hung Chen Dang, Ph.D., laid aside his records of experimental results and paused to reflect. "Why did I decide to come to the United States?" He smiled, explaining, "In China, everyone wants to come to the United States. Here, if you have the ambition, you can do anything."

He had the ambition, enough to carry him from China to Formosa and then to the United States. As he went, he collected degrees — a B.S. in chemistry and physics, an M.S. in biochemistry and a Ph.D. in pharmacology. Now he is a research associate at Cornell.

With Prof. Willard J. Visek, he is studying the use of the enzyme urease to immunize animals against some of the effects of radiation. No one can explain exactly why an animal dies from radiation, and how urease immunity protects against radiation is not completely understood. However, experimental results indicate that injections of the enzyme either before or after irradiation greatly increase the chance for survival.

Research at Cornell has benefited greatly from the knowledge and diverse backgrounds of the University's research associates. Dang is an excellent example of these highly qualified individuals working at Cornell.

A native of Kwangsi, China, Dang has a remarkable academic record. Leaving home at the age of 15 to attend one of the best Chinese high schools, he graduated at the top of his class. Then he took the national college entrance exam, being the only one from his area to pass it. He scored so well that he was accepted at National Central University, one of the three best universities in China. His neighborhood resounded with exploding firecrackers as friends expressed their joy and pride.

Graduating with a degree in chemistry and physics, he accepted teaching positions at Pai Sai College and at a high school. But there was unrest in China, and, Dang recalls, "Everyone was scared of the Communists." There weren't enough ships and planes to accommodate all the people who wanted to leave the country. Because of the position he held, Dang was allowed passage on government ships. "There was no time to plan," he recalls. When there was enough standing room for him on one of the ships, he boarded it and sailed from China, just one day before the Communists took over the country.

He came to Formosa and there worked as a research associate at the Ordnance Research Institute in Taipei, all the while dreaming of continuing his education in the United States. There, he felt, were the opportunities for "anyone looking for a good future."

His first step to reach this goal was backward; he failed the U.S. Consul Conversation Exam. But he rallied his knowledge of the English language and pushed forward, passing a three hour written exam. Then, while living on a \$20 monthly paycheck, he faced a \$2000 deposit for university admission. "But you can always find a way to go," he said. In 1956 he entered Montana State.

Two Research Associates At Cornell

Help Advance Medicine . .

by MARIA MELNYK '68

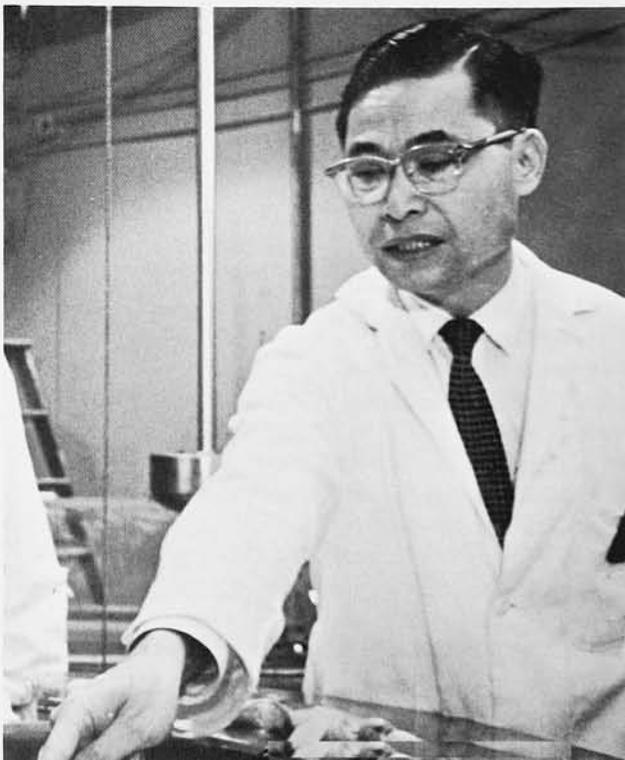
Once he reached the states, he faced more problems. He had to support himself, so he took a job as a laboratory technician. Then in lectures he had to sit and unscramble the various verb tenses tossed at him by fast-talking professors. Yet he received almost straight A's, and his professors urged him to continue his graduate work at a larger university.

Having received his M.S. degree in biochemistry at Montana State, Dang proceeded to the University of Chicago. Here he became Visek's advisee. While studying for his Ph.D. in pharmacology, he held down two jobs and taught part-time at the University.

In 1964, Visek came to Cornell, and Dang, who had been working with him since 1958, came with him to Ithaca, where they continue to work together.

Dang plans to apply for U.S. citizenship, and after leaving Cornell, may follow a career in teaching or industrial research.

Dr. Dang indicates a mouse prepared for irradiation.



. . . and *Build An Industry*

by MARYA DALRYMPLE '70

Research associate, Dr. Ernst Siegenthaler, in referring to man's education, philosophizes, "If you stand still, you fall back." Siegenthaler, who is presently working with Prof. Frank Kosikowski in the Department of Food Science, is particularly interested in cheese-making techniques. He is now doing research in this field in an effort to update his knowledge of such processes. After doing consulting work in Switzerland, he has come to Cornell to experiment and secure new techniques for future use in the underdeveloped nations.

Siegenthaler, born in Switzerland, was in the United States fifteen years ago to do graduate study at Iowa State. He then worked for the Food and Agricultural Organization of the United Nations for six years. Under their auspices he worked and travelled in the primitive regions of Latin America, the Far East and Africa. While in Guatemala he studied the Indians in the Andes, and surveyed the possibilities of establishing a dairy industry there. In Jordan, he was in charge of the establishment of a dairy department connected with the agricultural college. He also taught a course there in dairy technology.

Probably his most ambitious project has been an effort to start a cheese industry in the Himalayan country of Nepal. Living there with his wife and son, he began training the natives to produce better milk and butter products.

Nepal, he feels, has been his most exciting, gratifying and difficult assignment. It was tough because the work was centered in the primitive mountain villages, seven days walk from Katmandu, the capital of Nepal; he and his family lived in a region where it rained each day; meals often consisted of rice for lunch and potatoes for supper; and finally, their home was a rugged tent, and their floor, the hard earth. Furthermore, due to the language barrier, all of the dairy expert's instructions had to be communicated to the people through interpreters. Consequently, says Siegenthaler, "patience was a necessity in the work I was doing."

The mountainous regions were chosen for the new cheese industries because cheap milk was available from the yak herds. Up until the time the cheese industry was initiated, there had been no proper outlet of milk or milk

products. In addition, since the Tibetans had always made butter, it would not be difficult to expand this process into one of more productive cheese-making.

The Siegenthalers and their cheese makers moved seven times from village to village while in the mountains, carrying all their equipment with them each time. The equipment was very simple, the largest items being a cheese kettle, a cheese press, and a butter churn.

They found the people quite interested in learning cheese making. Its sale of course would provide them with extra money with which to purchase spices, matches, cigarettes and tools.



Dr. Siegenthaler removes some cheeses from their molds. These come out round and taste like the Swiss cheeses.

Cheese-making, however, is only productive during the monsoons, for then lush grass grows upon the hillsides, and the yaks can produce an abundant supply of milk. The cheese itself, very similar to that produced in the Swiss Alps, is sold to India. In all, twelve new cheese factories were set up in Nepal by Siegenthaler and his successors.

The people themselves are semi-nomadic, living in roughly built homes, and dependent upon their yak herds for an income. All who live in this rugged part of the world must be strong and hardy to survive. Disease is prevalent, and many of the children die at a young age. Mrs. Siegenthaler, with her medical knowledge, was the only doctor for hundreds of miles. This was the type of harsh life which the Siegenthaler's adopted as their own.

Dr. Siegenthaler, who is leaving Cornell in June, and plans to continue his career as a technical assistant in the underdeveloped nations, has contributed much to the dairy industry in many countries. It can truly be said that he is a man who helps others to help themselves.

COMPUTERS IN AGRICULTURE

by BRADLEY BERTHOLD '67

Computers in agriculture? Yes, definitely in agriculture. While most of us are familiar with uses of computers in space research, mathematics, and other fields of science, the importance of these machines in shaping and handling the explosion of knowledge in agriculture gets relatively little attention.

But computers may be largely responsible for the forecast of an increase in efficiency of farm workers which states that one man will be able to raise enough to feed 85 people by 1980, while he can feed only 35 now.

The modern commercial farmer is a business manager. Whether he runs a dairy farm, produces cash crops, or raises beef cattle, he needs mountains of information to make the decisions on how his business should best be run.

Should he cull this cow from the herd, or keep her another year? Should he plant more corn and less cabbage? What mixture of feed will fatten his hogs best? Should the old tractor be replaced by a more efficient but more expensive model? How efficient is his whole operation? Will there be a drought next year?

These are some of the questions computers are helping the farmer answer.

Prof. Clifton W. Loomis, who teaches farm management in the agricultural economics department of the New York State College of Agriculture at Cornell, works with an electronic farm accounting program set up in experimental form. Last year, only a few farms representing four counties in New York State were in the program. This year, the experiment is being continued with about 475 farms of various types (dairy, orchard, etc.) in nearly every county.

In this program, records of expenses, operating costs, efficiency of labor, rates of production, credit accounts, and other records important to the farmer are collected and sent to Cornell monthly. Computers are used to process the information, and a concise record is returned to the farmer each month.

The records he gets back comprise a monthly business record, a financial statement, and an "enterprise" state-

ment, which details information about a specific operation, such as the sale of veal calves. These are usually key aspects of his operation on which the farmer wants more specific information. The records also compare performance of the farm to date with its performance for the corresponding period the preceding year, and with the performance of "all farms" in the program.

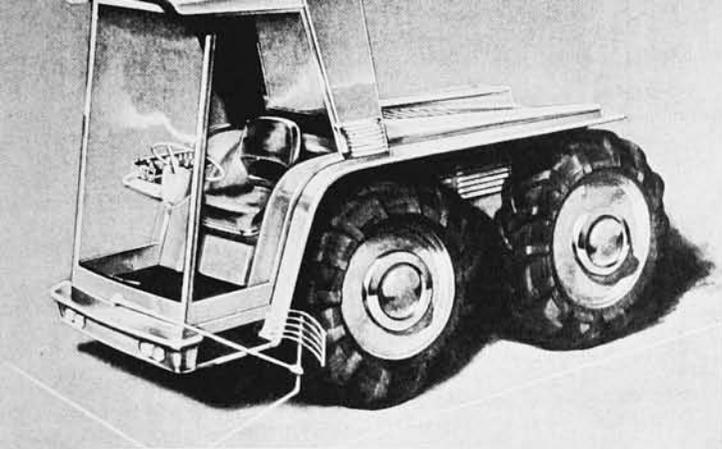
Tax and social security information is also derived from the computer statements.

Another program developed by Cornell, in cooperation with the Dairy Herd Improvement Association, is run by the animal science department of Cornell's College of Agriculture.

This program, which began in crude form in 1948 with a calculator, now has an IBM Systems 360 computer, which is used to process and store records of about 440,000 dairy cows, plus a few sheep and beef herds, representing about 9,500 dairy farms in the New England States, New York, New Jersey, Delaware, and West Virginia.

Prof. Charles R. Henderson of the Department of Animal Husbandry operates a computer that can be used in several ways by the farmer to store, process and analyze farm records.





In the 1980's, turbine tractors such as this will be controlled by operating programs fed into them with computers. Turbines will offer increased horsepower without the weight of conventional power sources.

Lyle H. Waddell, director of the dairy records laboratory, says the office at Cornell is one of 17 which are located so as to provide similar services for dairymen across the country and in Puerto Rico.

Dairy records information regarding performance of cows, calving times, feed mixtures, body weights of each cow, as well as total herd records, are kept.

Monthly summaries are sent to the farmers after computer processing.

The individual animal reports allow the farmer to make better decisions about which animals to breed and when to breed them, what concentrations of feed are most suitable, and other information which allows the farmer a more complete picture of each cow.

Total herd summaries give such information as herd averages for the month, totals for the previous 12 months, and total herd averages for the current 12 months.

Records are kept for research, which takes up about half of the computer time. Graduate students and professors engaged in animal science research use most of this time, Waddell stressed.

Weather information is another area in which computers are becoming more and more useful.

Rather than try to forecast what the exact weather will be far into the future, computers are used to review previous weather and predict general trends, such as dry or wet seasons, temperature ranges, and other weather trends which are of immense use to farmers in planning crops.

Records involving details of soil temperature, "root zone" level soil moisture, and other measures can be processed by computers so farmers can foresee changes in emergence time of young plants, yield potentials, insect population, fertilizer needs, and other information which could be vital to the farmer.

Biometrics also makes use of computer techniques. Prof. Shayle R. Searle works with computers in the biometrics unit of the plant breeding department of the College of Agriculture at Cornell. His work entails train-

ing of graduate students in statistical methods and use of computers in biometrics experiments.

Computers are already playing an important part in machine design and cost accounting of farm equipment. Records of fuel consumption, frequency of repairs, and overall efficiency of machines such as tractors, threshers, planters, and sprayers can be processed by a computer. Farmers can decide whether to buy or sell machines, whether to use aerial application of spray or a tractor-towed sprayer, and other such matters better than they could without the masses of information the computer reduces to intelligible form.

Plans for computer-programmed tractors and other machines are already on the drawing board. Punched tapes programmed by a computer would control movements and operations of the machine, such as the turning on and off of spray nozzles, tractor speed, and many others, so the tractor driver would do little but monitor the control panel. Built-in computers would automatically align the machine with plant rows.

What does the future hold for computers and the farm? More uses than those briefly outlined here are seen.

At a recent conference on computers in agriculture held at Cornell, various speakers outlined their expectations that computers would become increasingly more important to the farmer and "agri-business" man.

Banks are now beginning to require the detailed records computers provide farmers before they will consider a loan.

Computer centers on each farm may greatly increase the efficiency of each farmer, providing him with information on which to make decisions about virtually all operations.

Regional centers might allow a farmer to "plug in" to central records for his whole region. He might be able to "speak" to the computer in a language simplified into a form of English.

American agriculture is said to be the most efficient in the world, and computers may very well help to keep it that way.

The Heptagonals

TWO DECADES OF TRADITION, COL

by ANTHONY INGRAHAM '69, DAVID STEWART '69 and CHARLES WILSON '69

Cornell University is the home of one of collegiate athletics' most exciting events. This is the Heptagonal Indoor Track Championships, which has been marked by tradition, close finishes and capacity crowds ever since it has been held in Barton Hall.

The Heptagonals have not had their entire history in Ithaca. These track championships were introduced to the sports world at the Boston Garden in 1948, and remained there until 1951. Except for the meet's first year the same ten teams have participated in the event throughout its history. They include the eight Ivy League schools, and Army and Navy.

In 1952 the Heps were moved to the 102nd Engineers Armory in New York City. While the track events were run off in the Armory, the field events were held at Yale. This inconvenient situation resulted in poor attendance and an unsuccessful meet. Ben Mintz, sports publicity director at Cornell, observed that "there were more competitors than spectators." Everyone was just about ready to give up the idea of the Heps in 1953 since it didn't seem to be attracting any interest in the metropolitan areas.

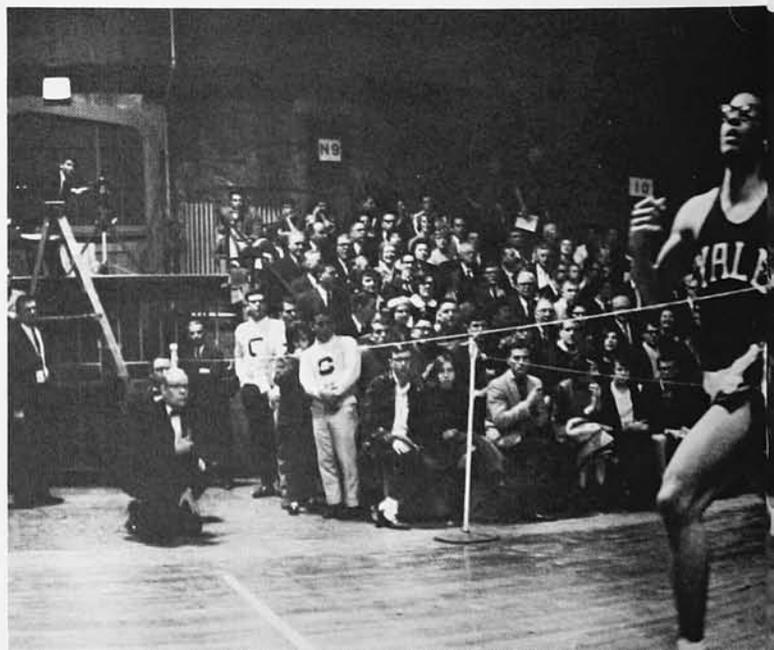
However in that same year, Robert J. Kane, Cornell's director of athletics, proposed that the Heps be held in Ithaca. The move was made and the meet was saved from extinction. It was a tremendous success that first year in Barton Hall as a capacity crowd of 4,500 witnessed the proceedings. The meet itself was perhaps the most exciting Heps ever held. In fact Mintz considered it one of the athletic highlights of that winter. Up to the last event, the one-mile relay, any one of four teams could have taken the meet. Cornell, however, won the relay and tied Columbia at 33 all to share the championship. Penn and Army were close behind with $32\frac{7}{12}$ and $32\frac{1}{4}$ points respectively. The event was so successful that Leonard Koppett of the New York Times wrote the sentence that has set the tone for the Heptagonals ever since. "In a fabulous finish in which Columbia and Cornell tied for the team title . . . the Heptagonal indoor track and field championship meet, in its sixth year of existence, found a home here at Cornell University today." The meet has remained at Cornell ever since 1953, and has

never attracted less than sellout crowds.

There are five men who have played major roles in making the Heps a great success. Kane, the man who first suggested that the meet be moved to Cornell, is the director of the Heptagonals. Pat Filley and George Patte are the assistant directors of the Heps. Filley is also business manager and in charge of ticket sales. Norman Padula, the head grounds keeper of the Cornell athletic fields handles the complicated and important task of preparing the Barton Hall floor for the meet. Mintz is responsible for publicity and is the public address announcer. These men and others have all helped to make what track officials around the country call one of the best conducted meets in the nation.

The large number of referees, judges and timers come from several Eastern colleges. It has been a tradition that they all dress in tuxedos for the event. Charles E. Treman Jr., an Ithaca banker who has been the head referee for the past decade, also adds a stovepipe hat to his formal attire.

Wendell Mottley setting world indoor record of 1:09.2



OR AND THRILLS

A device introduced several years ago to aid these officials in judging more precisely the order of finish of the track events is the phototimer made by a famous watch company. The precision accuracy of this instrument is especially valuable in determining placings in the usually tight finishes of the dashes and hurdles. It is used to establish exact times and determine "photo-finishes" in every indoor and outdoor track meet.

The Heps employ the same distances, standards and judging methods as all other major meets in the country. It does however have some unique differences and characteristics. First of all, each of the ten teams are limited to three starters for any event, and to a certain number of competitors in groups of events. This limits the strength of teams with great depth in just a few events, and provides an advantage to teams with overall strength in a variety of events. The scoring also differs in the Heps in that a bonus point is given for winning, making first place worth two more points than second. The final difference has to do with the number of trials required

of each competitor for the track events. All runners compete in only one trial heat in the dashes, hurdles and middle distance races, while no heats are run in the one and two mile events. Therefore the contestants are not worn down as much from numerous earlier races as they are in the larger track meets.

The Heptagonals have certainly been marked by numerous spectacular performances. But probably one of the meet's greatest moments occurred in 1964 when Yale's Wendell Mottley, a native of Trinidad, set the world indoor record for the 600 yard run with a time of 1:09.2. It has been the only world mark ever set in Barton Hall. His feat was especially amazing in that it was executed on a flat rather than banked track, and was run in non-spiked shoes. Mintz recalls that announcing the world record to the Barton Hall crowd was one of his greatest thrills in athletics.

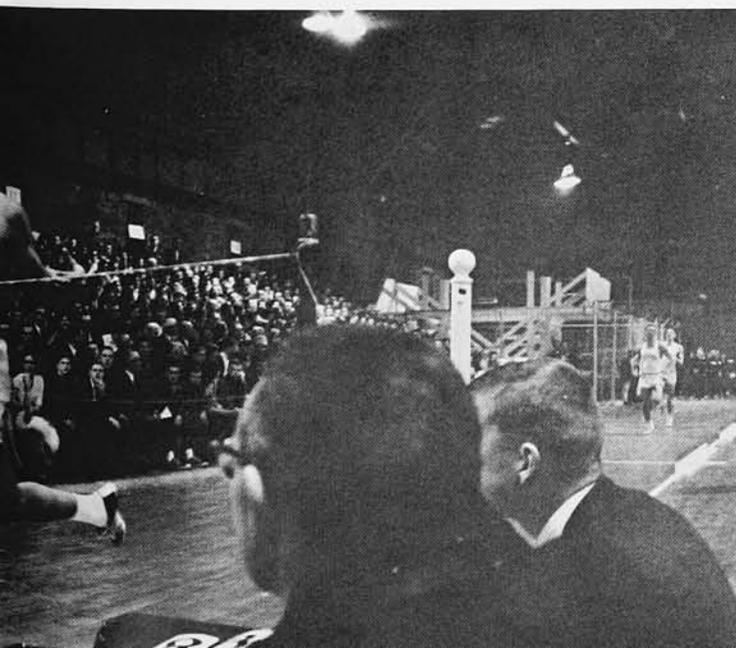
There are three major awards presented at the completion of each meet in addition to the medals for individual place winners. The team trophy is awarded by the Heptagonal Games Association to the team accumulating the most points. The Outstanding Performer Award is presented by the Cornell Club of Ithaca to the athlete chosen by representatives of the press and the ten head coaches. Last year's winner was Chris Pardee of Harvard, who broke the Barton Hall and Heptagonal high jump record with a leap of 6' 10". The Jack Moakley Mile Trophy is given by the Cornell Class of 1912 in honor of Cornell's late head coach of track and cross country who was at the helm for fifty years through 1949.

It is interesting to note that only four teams have ever won the Heptagonal championships. They are Harvard, Army, Yale and Cornell. Columbia has tied once, and Navy has come close in several meets, but never won. Harvard and Army have the most championships with six apiece. Yale has captured four crowns while Cornell has held the title three times.

The Big Red tied for first in 1953, and won in 1955 and 1958. They were a close second in 1954, 1956, and 1957. The Outstanding Performer Award was won by Cornellians in 1956 and 1957. In '56 Al Hall received it for setting the Heptagonal record in the weight throw at 63'-3/4". In '57 the award went to Irvin "Bo" Roberson, now a professional football player, who won the broad jump and placed second in the 60 yard dash.

This year's Heps? Most experts expect the top four teams to be, in this order, Army, Navy, Harvard and Cornell. And as the records of past years have shown, the ability of the athlete to continually perfect his body and his individual specialty never seems to abate. For this reason spectators can look for this year's March 11 meet to provide its own color, excitement and its fair share of outstanding performances and broken records.

the 600 yard run at 1964 Heptagonals in Barton Hall.



ORVILLE L. FREEMAN *looks at*

AGRICULTURE IN THE 21ST CENTURY

Editor's Note: Orville L. Freeman, Secretary of Agriculture, will be a speaker at Cornell University's Agricultural Leaders' Forum on the campus on March 23. Since "man's fascination with tomorrow is as old as man himself," we thought our readers might be interested in excerpts from a recent "crystal ball" statement made by the Secretary.

In just 33 years we'll turn the corner into the 21st Century. What will it be like, American agriculture in the year 2000? No one really knows, of course. There are too many intangibles . . . too many uncertainties. But predictions are being made, and perhaps we should examine them.

I make no pretense of being an expert prognosticator. All I can do is tell you what some experts foresee for agriculture in the year 2000.

Some envisage the year 2000 as the time when the American farmer finally is freed from the arduous and time-consuming demands of planting and harvesting . . . a time when he, too, enjoys leisure for the pursuit of recreation, entertainment, advanced learning, and he and the world he inhabits can provide true parity of education and opportunity for his children.

Some see him sitting in an air-conditioned farm office . . . scanning a print-out from a computer center . . . typing out an inquiry on a keyboard which relays the question to the computer.

The computer center, which he may own in partnership with other farmers, perhaps through his cooperative, helps him to decide how many acres to plant to what crop, what kind of seeds to sow, what kind and how much fertilizer to apply, exactly what his soil condition is, and what day to harvest what crop.

The experts say the fields on this hypothetical farm will bear a surface similarity to the fields of today . . . but a surface similarity only. They see a land carefully graded and contoured to control erosion and the use of precious water. They see a soil bearing nutrients to meet the specific needs of each crop, and treated to control harmful organisms, weeds and plant diseases.

They foresee virus-free plants, bred by geneticists to

give higher yields in a much-shorter growing period and to mature at the same time. The stalks on these plants, they say, will lend themselves to mechanical harvesting, and new uses will be made of the parts of the plant once discarded at harvest.

The experts envision all the field work on this farm carried out by automated machinery, directed by tape-controlled programs, and supervised by television scanners mounted on towers.

They predict that weather will no longer be the incalculable threat it remains in our time, for satellites will provide long-range forecasting—providing time to prepare for, divert or dissipate damaging storms.

They say robot harvesters will complete the farming operation with high-speed picking, grading, packaging and freezing . . . and will then transport the produce to transportation depots for distribution to retail warehouses.

While many find this picture of the future exciting, others find it depressing. Some contend that automation and the computer will excise the soul from farming . . . will destroy its joy, dull its satisfactions, and chill the ageless intimacy between man and his land.

But others say No. They say the farmer of the 21st Century will be more deeply, intricately, and learnedly involved with the land than ever before. They point out that no computer can give a learned answer until it is asked a learned question . . . that no robot tractor can operate until a skilled human being programs it to operate.

And they contend that the joy and satisfaction of farming will come—as it always has—from the successful interplay between the farmer and his soil.

By the year 2000, optimistic visionaries say, this interplay will have become so successful that yields of today will be doubled or tripled . . . that corn yields, for instance, could run from 300 to 500 bushels to the acre.

Ah yes, the critics counter, but what good automation, what good maximum efficiency, what good bigness, what good record yields . . . if the producer cannot *own* the



*Secretary of Agriculture
Orville L. Freeman*

The inexorable nature of the technological revolution dictates that the farms of the future will be bigger, will be better, and will be far more costly to own and to operate . . .

What will Agriculture/2000 mean to the housewives of America? It will mean better foods, more nutritious foods, better tasting foods, a bigger variety of foods . . . and still at a reasonable cost, thanks to an efficiency of operation which continues to hold unit production costs to a minimum.

By the year 2000, the consumer should be able to buy her whole milk according to whatever butterfat content she desires. She'll choose meat cuts with hardly any fat. She'll receive more protein per portion of cereal. And all of these changes will come about through the miracle of genetics . . . by breeding cows and meat animals and cereal grains to meet specific dietary and taste requirements.

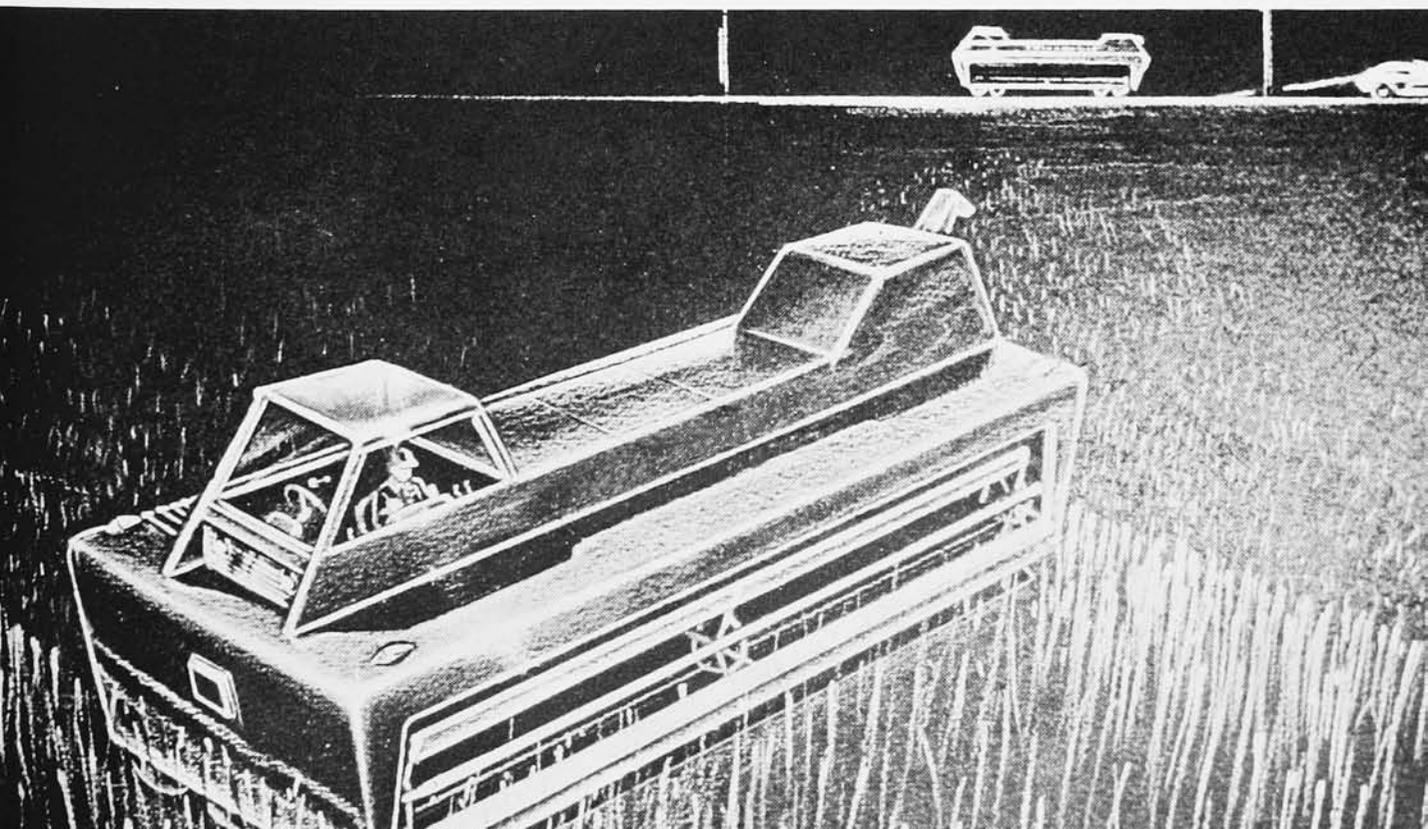
And how will she shop? Most likely, she'll go to a pushbutton supermarket. There she'll drop a coded card into a slot beside the commodity she selects and punch a button. Impulses travel two ways—to a cash register where her bill is totaled, and to a central warehouse where the order is assembled. The completed order will await the customer at her car.

land he works? How much joy, how much satisfaction, how much ageless intimacy with the soil can a farmer reap from land that is not his?

For how, they ask, could one farmer ever hope to own a farm that big, that automated . . . that expensive?

If there is one troublesome nettle in agriculture's garden of tomorrow, this is it. Financing the farm of the future through the methods of today would be impossible, for the farms of the year 2000 will require investments of millions—not thousands—of dollars.

This combine of the 1980's, capable of harvesting at 12 miles per hour, is an example of the air-conditioned, streamlined harvesting equipment in the farmer's future. Electrostatic devices may separate grain from the chaff.



Orienting the Freshmen

by JERROLD TRUB '70

In December of 1966, Director of Resident Instruction, Herbert L. Everett had an open meeting with students to explore their thoughts concerning the Orientation 101 course that is required of all freshmen in the College of Agriculture. Prof. John P. Hertel and Prof. Howard S. Tyler, the major figures involved in the organizing and

Howard S. Tyler



the teaching of the course, asked the students at the meeting for constructive suggestions for improving the content of the course and the methods of presentation.

The responses ranged from such remarks as, "except for the background information on Ezra Cornell and Andrew D. White, the course is worthless and more or less a waste of time" to "I enjoyed the course, especially the history of the University and the College of Agriculture." It was evident to the resident instruction staff therefore that the course had its strong and weak points.

In order to appreciate the strengths and faults of the organization and content of Orientation 101, a background of the course is needed.

The individuals who initiated the idea for such a course were students; specifically the seniors of 1923. These students felt that they had been shortchanged due to a lack of orientation to the University, the College, and the life they would encounter here. For fifteen years thereafter, the course was given as a lecture, with each aspect of university and college life being covered by an expert in that particular area.

Then in 1938, Professor Hertel entered the scene and immediately noticed student dissatisfaction with the method of instruction. To confirm his beliefs, he urged the Director of Resident Instruction at that time, Prof. A. W. Gibson, to poll the students. The results were clear enough to give Hertel the green light on his proposal to personally experiment with discussion sections as an alternative method. And it is this format that is generally being used today.

Professor Tyler outlined three reasons for the course's existence. First, the primary reason is the desirability of aiding the student in the adjustment to university life. Secondly, by providing the students with information about the College's organization, operation, history and traditions, the benefits are mutual; the students gain from a better understanding of the environment, and the College from more favorable public relations. Finally, alienation is reduced by contact between the Office of Resident Instruction and the students.

Today the course is required of all students entering the four year program in the College of Agriculture, runs for one semester, involves one hour of class time each week, and offers one hour of credit. Hertel and Tyler each teach six sections, while Prof. Leigh H. Harden and Mr. John Spencer divide the remaining four.

Presently, the student leadership in the College is pushing primarily for changes in the organization of the course while remaining satisfied with its content.

Topics	Of much value	Of value	Of little value	Omit topic
Use of Mann Library	31%	54%	12%	3%
How to improve study techniques	17%	47%	31%	5%
Purposes of a University Education	9%	46%	34%	11%
University and College operation	52%	43%	4%	1%
Choosing a vocation	12%	47%	33%	8%
Vocational information	11%	50%	31%	8%
History and traditions	19%	47%	28%	6%
Organization of Cornell and the College of Agriculture	17%	50%	27%	6%

One of the principal reforms they favor is the reduction of the length of the course to half a term. The value of this, the leaders say, would be to enable the students to more quickly orient themselves and to save them from the burden of another final in January. However, Professor Hertel pointed out that this plan would be impractical since the resulting need for two classes per week instead of one would put too much of a strain on the Office of Resident Instruction staff. Student representatives then offered a plan that would call for one large lecture class and one recitation per week. Among the questions Hertel asked with respect to this proposal were: are the students willing to assume the extra load; and are they ready for certain features of the program such as "choosing a vocation" when they are still chiefly con-

cerned with adjustment to their new environment.

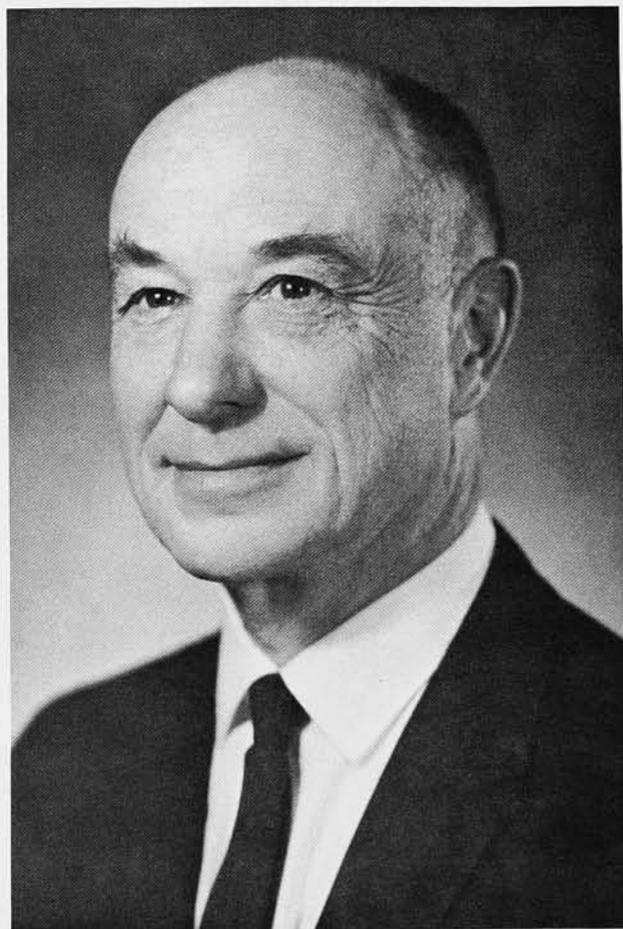
Other student suggestions have included elimination of the one credit hour rating and grading the course on a satisfactory-unsatisfactory basis.

With respect to content, some student leaders feel that the emphasis on instructing students how to devise a weekly study schedule should be changed to a greater emphasis on helping students develop a four year study program, thereby acquainting them with the large number of courses offered by the University, and encouraging them to think about their future.

When asked about the relative importance of the topics covered, Hertel stated that it depends on the student and his interests. The table that appears above summarizes the results of a poll taken of the students entered in the orientation course given in the Fall of 1965.

What does the future hold for Orientation 101? Director Everett, who will play a major role in the determination of its future, wants to make sure that the changes represent the best interests of all concerned.

John P. Hertel



Memories for the Alumni . . .

ON THE CAMPUS

50 YEARS AGO

THIS MONTH

The March *Cornell Countryman* reported: "Kermis, the fourth annual student show of Farmers' Week, held in Bailey Hall on Tuesday evening, was good from start to finish, and particularly good in that the start and finish were reasonably close together . . . Forty-five took part in the big show of the evening, "Prince Caloric and Princess Pieta," a dietetic extravaganza in four courses, in which girls of Frigga Fylga and Juniors in the College of Agriculture combined to close the program. Prince Caloric (G. E. Peabody, '18) departs from the Land of Good Health and Pure Food on a pilgrimage into the Kingdom of Piedom. Here the Princess (Helen Adams), offers him pie and he, retaliating, proposes marriage . . ."

According to the *Cornell Daily Sun*, one of the prize winners during Farmers' Week in the rural school exhibits was a "double-row stitched" apron — made by a 14-year-old boy.

And in sports, the Cornell basketball team beat Rochester 31-15 in a high scoring and exciting game.

A faculty committee launched a move to improve the standard of undergraduate scholarship at Cornell. Some

of their notable suggestions were: (1) a convocation hour devoted to the recognition of scholarship and (2) an effort to induce the senior societies and the fraternities to give increased recognition to scholarship in electing their members, and to cooperate in encouraging high distinction in scholarship.

Members of the Collegiate Anti-Militarism League met in Goldwyn Smith Hall. The purpose of the group was to combat the extension of military training, especially that which affected colleges.

Major General George Goethals, "builder of the Panama Canal," spoke at the convocation on "The Constructive Features of the Panama Canal." He declared it to be adequately protected in case of war.

Prof. Camillo von Klenze said in an interview that he was highly impressed by the rapid growth of Cornell. "The new dormitories are a great attraction to Cornell and are as beautiful as any I have seen."

The number of "bustees" reached a record mark as 240 students were released at the end of the first term. This topped the previous high of 92 set in the fall of 1915. The School of Mechanical Engineering led the way with 95 bust outs. There were grumblings that this disaster resulted from the introduction of a new grading system.

PICTURE CREDITS

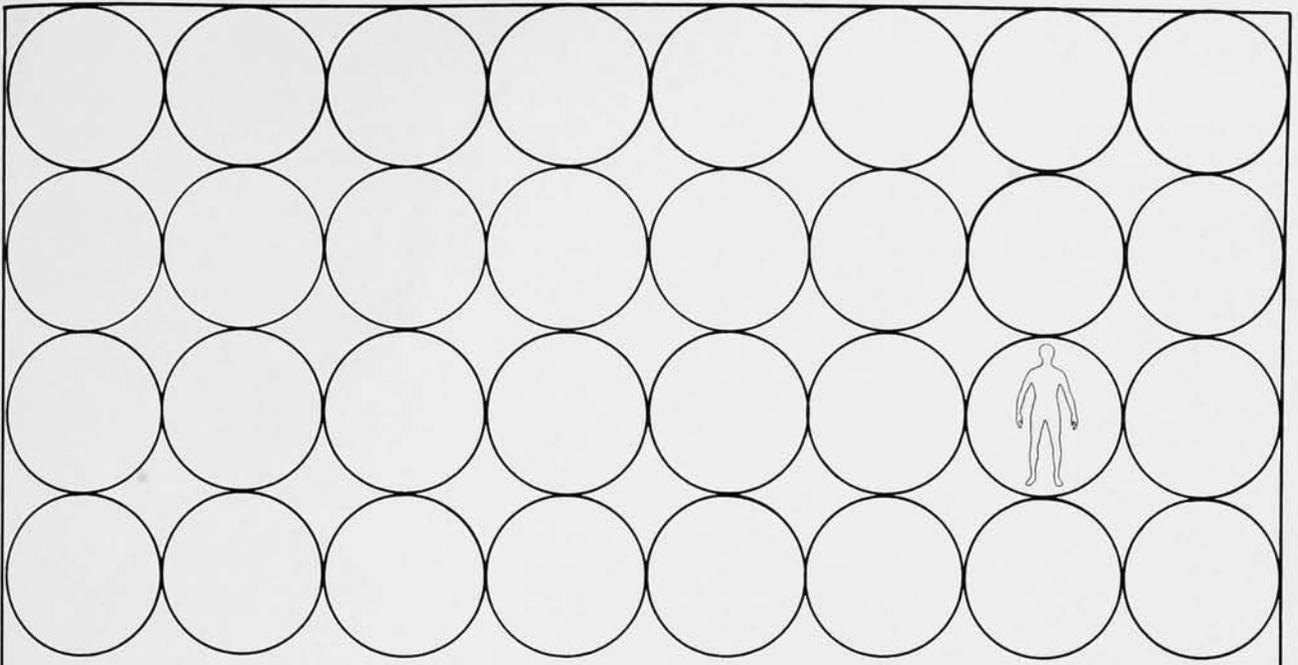
Page 6 — International Harvester Company; pages 8, 9 — CUAA; page 11 — International Harvester Company; pages 12, 13 — Photo Science.



DREER AWARD

Cornell University student Jeffrey R. Moore has won an award and a trip to Europe. Moore, a senior in the Department of Floriculture and Ornamental Horticulture at the New York State College of Agriculture, received the \$2,750 William Frederick Dreer Scholarship for 1967.

This award will take him to Great Britain and the Scandinavian countries for a year. He will leave for Britain on June 29 and will work at botanical gardens and research institutes on plants used in landscaping. He will also learn about the management and types of grasses used for parks, golf courses, airports, and other similar areas.



MAN IN A CHANGING ENVIRONMENT

NEW CONCEPTS OF TIME-BEAUTY-SPACE AND SOCIAL RELATIONS

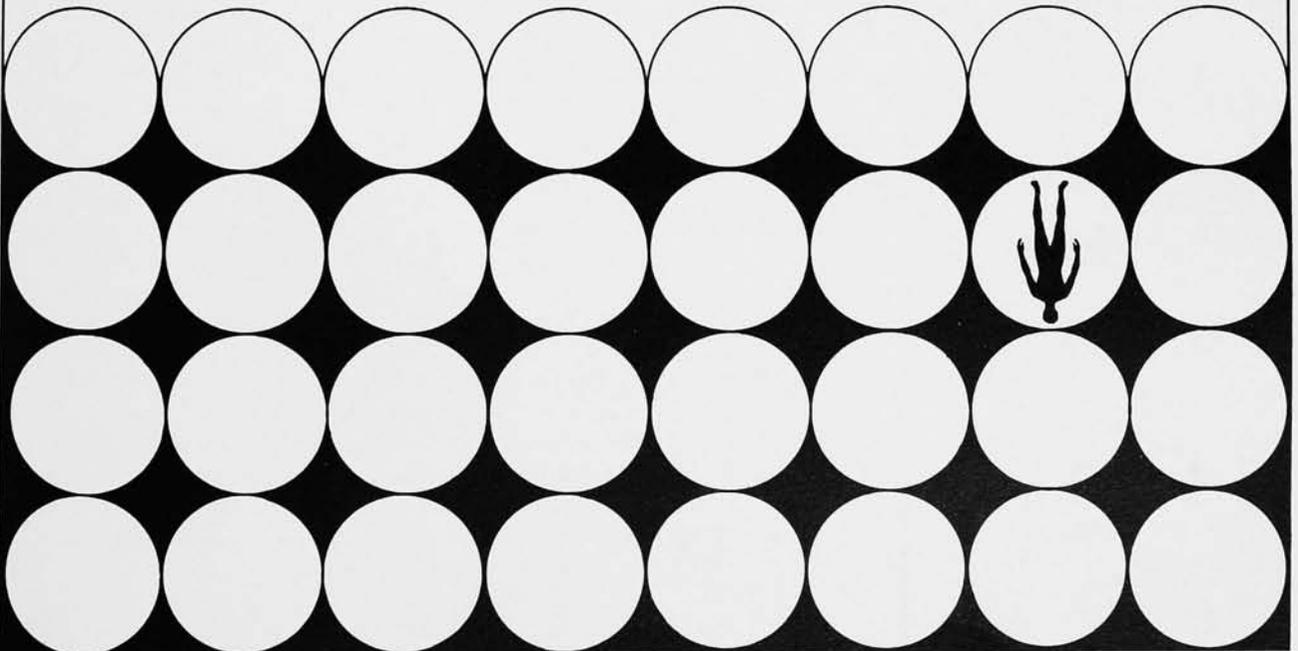
SEVENTH ANNUAL INSTITUTE SPONSORED BY THE NEW YORK STATE COLLEGE
OF HOME ECONOMICS, A STATUTORY COLLEGE OF THE STATE UNIVERSITY,
AT CORNELL UNIVERSITY

ALICE STATLER AUDITORIUM

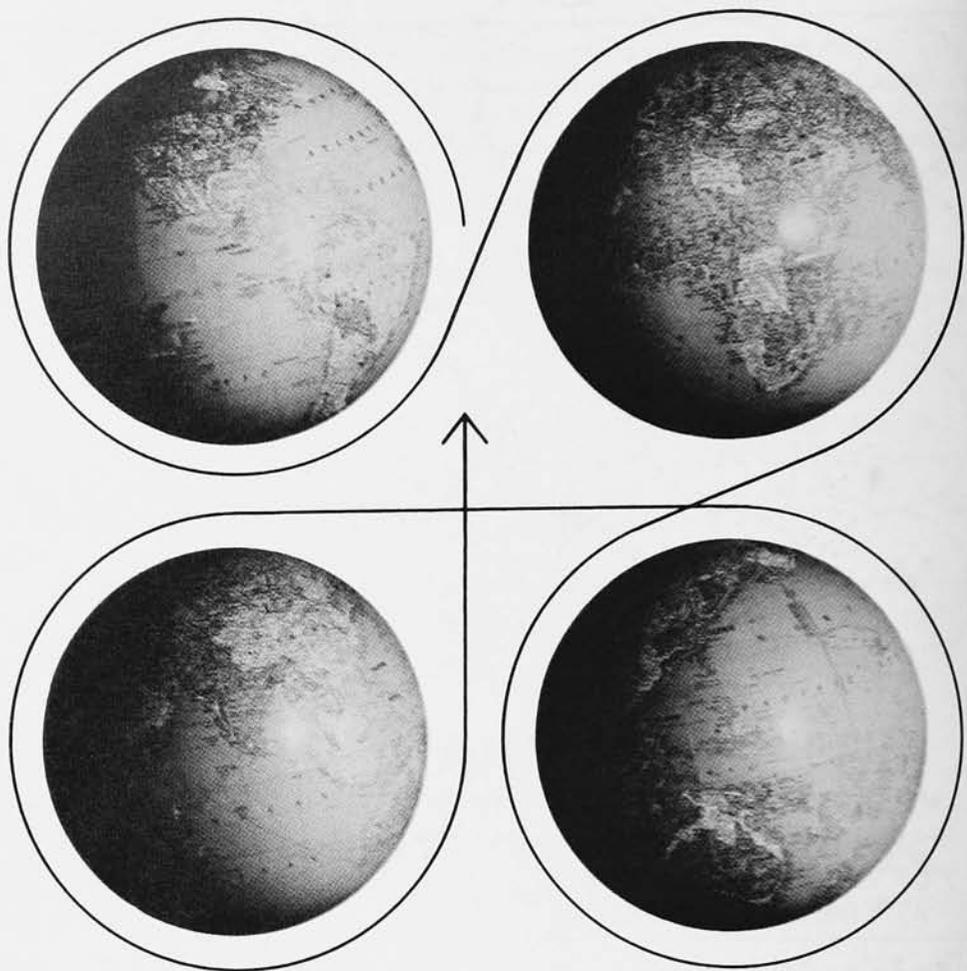
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APRIL 18, 1967

OPEN TO THE PUBLIC



Acquisitions Div.
Alfred Mann Library
Cornell University
Ithaca, N. Y.



The Flow of Talent Has Not Been One Way

No. 6 in a series
from the New York State
College of Agriculture,
a Statutory College of
the State University,
at Cornell University,
Ithaca, New York

Before Cornell's doors were opened for students, Andrew D. White, the University's first president, went abroad to collect professors, buy books and equipment, and visit other institutions to glean ideas. President White spent his days in Europe "in a happy flurry, like a mother given carte blanche to purchase a trousseau."

He found some distinguished professors in England and enticed them to Cornell, including the eminent historian and publicist, Goldwin Smith, and the famous veterinary scientist, James Law. From Germany came the first professor of agricultural chemistry. This list could be expanded.

In a few years, however, the flow of talent was going in the opposite direction. For example, Clinton D. Smith of the Class of 1873 became the President of Brazil's first College of Agriculture, and as early as 1897, Cornellians were helping China in agricultural development.

Students from abroad started with the first class at the University in 1868 — among them an Englishman, a Brazillian, who actually started a whole colony of Cornellians from that high country, and a Russian.

Today, **in the United States as a whole**, the largest number of foreign students are enrolled in Engineering, the smallest number in Agriculture. This is *not* the situation at Cornell. The largest number are in Agriculture (346), followed by Arts and Science (277), with Engineering third (234).

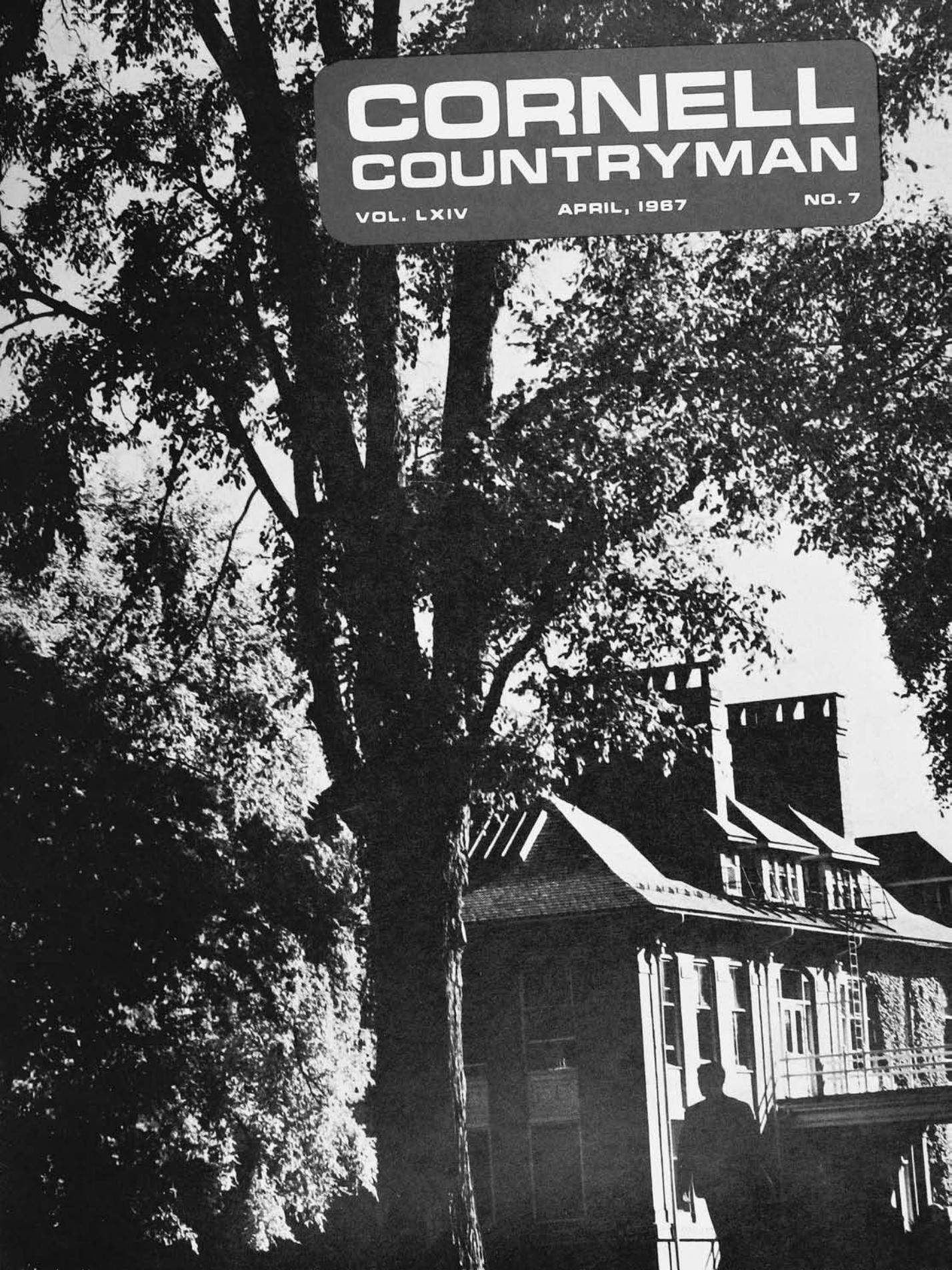
We are proud of our international students and the enviable position the College of Agriculture holds throughout the world.

CORNELL COUNTRYMAN

VOL. LXIV

APRIL, 1987

NO. 7



ON THE COVER

Spring really comes to the Campus this month. Here we see it in its full glory surrounding Roberts Hall, home of the Countryman.

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CORNELL COUNTRYMAN APRIL 1967 / VOL. LXIV — NUMBER 7

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Jordanella floridae, a member of the Cornell Fish Collection. The species in this collection represent all fishes found in the eastern United States.

FISH FOR STUDY

by MARYA DALRYMPLE '70

Most Cornellians are unaware that two summers ago this university was the site of a major fish migration. From the dank and dreary basement of Fernow Hall emerged the millions of fish in the Cornell Fish Collection on their way to a new home in the Cornell Research Park located at the Ithaca airport. As a result of this move, the fish today are found in well lighted and air conditioned storage buildings, providing superior conditions for study and research.

Until the 1940's, many of the animal collections, including the fish collection, were exhibited in McGraw Hall. Around 1930, under the direction of ichthyology professor Albert A. Wright, the fish were catalogued separately. In the late 1930's, Prof. Edward C. Raney, while working on his Ph.D., began the enlargement of the collection through extensive expeditions. Today Raney, one of the world's foremost ichthyologists, is in charge of the Cornell Fish Collection. He is an advocate of the field system of teaching, and as a result, his students have travelled extensively in the eastern United States collecting new samples of fish. Many of his pupils have done valuable research in the field of ichthyology.

The collection at Cornell is made up of species representative of all fishes in the eastern United States. Many of the fish are darters and minnows which have come from fresh water rivers and streams. These fish are not alive, but are killed upon capture and preserved for study. Stored in containers ranging from small vials to fifteen gallon crocks, the specimens are arranged in primitive to advanced levels of development. Major groups are organized alphabetically by taxonomic groups (genus-species). Since there are approximately 50,000 series of

fish in the collection, (a series being all of one species collected at the same time in the same place) there is a great deal of classification to be done. A large amount of data is filed about each fish, since, without the information, the collection is useless for study. Much of this filed material is concerned with the history of the fish, its origin, and the conditions under which it was found.

The collection is maintained by a number of graduate students working under Raney. These students also do individual research, and take frequent field trips in an effort to expand the collection. Each collector possesses a permit issued by the state government allowing him to catch the fish. The captured fish are not removed from public observation, however, since the Cornell collection is open to all who are interested in doing research. Any serious investigator is invited to look at the collection and ichthyologists from all over the world have frequently come to Cornell to do so. Many specimens are loaned and shipped to other researchers in the United States.

Various studies and experiments are presently being done with the fish collection. One graduate student is investigating the different behavior patterns in related species of fish due to environmental influences. Another is involved in studying the effects of hybrids in fish living in a stream in Candor, New York. Raney is working on the life history, ecology and systematics of fishes.

The Cornell Fish Collection is primarily used for study in systematic zoology. It represents the evolutionary relationship of animals to one another. It is the ichthyologist's hope to eventually obtain an accurate record of the fish from past to present. The collection of fish found at Cornell is and will be an important asset to this research.

CORNELL'S *Flying* INSECTS

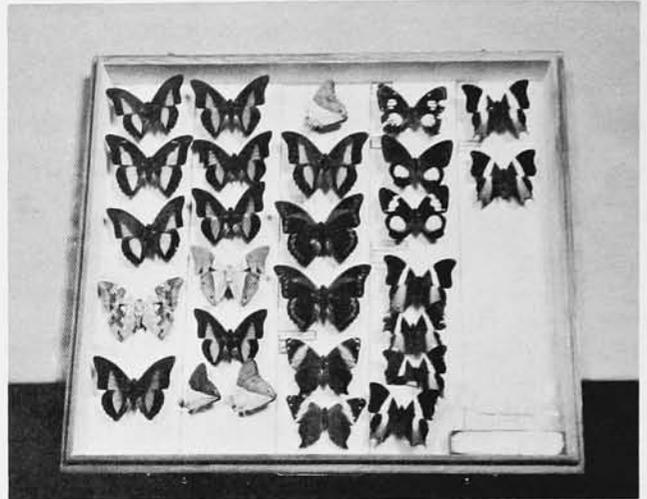
by BROOKE BRESLOW '68

If you're interested in knowing what sort of beetle you've discovered on your window ledge, or if you want to learn whether that butterfly in your back yard is really rare, and if the New York State Extension Service can't help you, the place to contact is the Cornell University Insect Collection. Located in Comstock Hall on the Cornell campus, the collection of over 2,000,000 specimens is one of the world's largest.

The Cornell collection was started in 1872 by John Henry Comstock, then head of the Department of Entomology. Specimens from the original collection are still used today in the major work of identifying unknown insects. Professor L. L. Pechuman, curator, views the identification and classification of these specimens as one of the primary functions of the collection. Most of the work of identification is not done on the non-professional level of wondering about those backyard butterflies, but rather on a more systematic and scientific level.

In their attempts to verify rare specimens, many entomologists take advantage of Cornell's loan system. Every student working on a project or thesis is assigned a lot number under which all of his insects are listed. In this way, every specimen is identified. If an entomologist discovers an insect unknown to him, he will ask for similar specimens to be sent from the Cornell collection. The researcher can then verify whether his specimen matches the one from Cornell. At present, over 300 lots are on loan. These lots vary in size from several hundred insects to over 3,000. Specimens are currently on loan to over 30 foreign countries, 89 universities, 16 federal agencies, 17 museums and 13 individuals. Insects from the Cornell collection are being studied in New York, Chicago, Washington, D.C., and London.

The length of these loans varies considerably. Loans to museums are often for more than two year periods. But some are short in duration. Recently, a researcher at the University of Queensland, Australia, wrote Pechuman



A trayful of specimens of the Cornell Insect Collection. Each insect is carefully identified and numbered.

asking to see a "one of a kind" specimen. This beetle, donated by a Cornell alumnus stationed in the Pacific in New Guinea during World War II, was sent to Australia and returned to its home in Ithaca in less than two weeks. The Australian entomologist, in her gratitude, donated ten new specimens to Cornell.

This is only one example of the many varied sources of insects. The majority of specimens in the collection come from Cornell researchers, extension agents, and independent and amateur entomologists. And housewives contribute their back yard findings. Vladimir Nabokov, the well-known author, donated his collection of North American butterflies to Cornell. Other entomologists also add to the collection. A major source of insects is expeditions which are usually sponsored by private grants. In recent years, there have been expeditions to Greenland, Mexico, Africa, and South America.

Many visitors come to the University to study the collection. Entomology classes from other universities have

. . . 2,000,000 specimens, now being studied in 30 foreign countries, 89 universities, and 17 museums.

also visited the collection as a requisite for their courses. Researchers come from as nearby as Binghamton, New York and from as far as Thailand. Pechuman cites the simultaneous and unannounced visits of two independent entomologists, one from Czechoslovakia and the other from Argentina. One researcher wanted to see some wasps, and the other was interested in grasshoppers. This is another example of the diversity and internationality of the Cornell collection.

Although this collection is open to viewing, preferably by appointment, it is not primarily a display collection. Its main function is the identification and classification of new specimens. Another major activity is the investigation of unusual cases. An example of such a case occurred recently when a Buffalo, New York couple discovered some beetles crawling out of their driftwood lamps. These lamps had been in the living room for over fifteen years before the couple discovered the insects. A specimen was sent to Cornell, and was identified as a tropical species known to infest dying trees. Their normal life cycle is approximately three years — these beetles had somehow survived for more than 15 years. Cornell researchers are now attempting to specifically identify the specimen and to locate the origin of the driftwood itself.

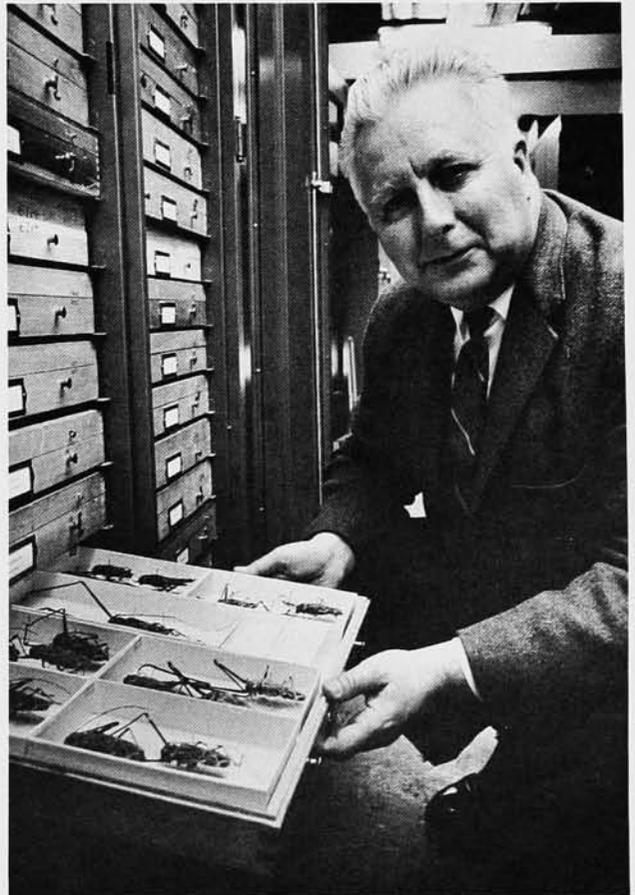
Aside from identifying and researching specimens from outside sources, Cornell entomologists conduct many studies in their own specialities. When identification requests are received, they are usually handled by the specialist in that area. A graduate student recently differentiated various fireflies according to their flashes. His research proved that there are more species of fireflies than had previously been suspected. The collection had to be rearranged to accommodate the new classifications. Pechuman points out that "the collection is dynamic. Our concepts of species are constantly changing."

The collection is organized to facilitate any changes in classification due to new information. The system used is a modification of the original one devised by John

Comstock in 1872. All specimens are pinned on movable plastic-bottomed trays. Thus, they may be moved without repinning to allow for the addition of any new specimens or for the rearrangement of current ones. Certain insects which are too small or too delicate to be pinned are kept separately in bottles of alcohol. This system, known as the Cornell system, is in use in almost all the major collections throughout the world.

Cornell's collection is well travelled. Its specimens have come from and been to the most remote corners of the globe. It is a varied and international collection in origin and use. Specimens vary in size from a few fractions of an inch to almost a foot. The colors of insects vary from dull browns and off-whites to iridescent blues and yellows and colors beyond description. Nature has certainly fashioned some beautiful specimens, and the Cornell University Insect Collection has most of them.

Prof. L. L. Pechuman, curator of the Cornell Collection, shows how the specimens are arranged on movable trays.



New Books by the Faculty

During the past year the faculty of the New York State College of Agriculture at Cornell has made great strides in maintaining the College's position among the leading agricultural institutions of the world. Advances have been made in research, instruction, and extension. And in this past year at least five faculty members have published



Prof. Lawrence B. Darrah

books concerned with agriculturally important areas of biology, plant breeding, and agricultural economics.

William T. Keeton, associate professor of biology, has published an introductory biology text entitled *Biological Science*. Keeton's text deals with the problems of modern biology in the light of evolutionary theory and is designed to give the student a continuing awareness of both the unity and the diversity that characterize life. Although the book gives full coverage to areas in which modern research has made its greatest advances, it does not overlook the study of the whole organism. The 955 page book was published by W. W. Norton & Company.

Food Marketing, a textbook by Lawrence B. Darrah, professor of marketing, is designed for introductory courses in marketing and food distribution. Presenting principles in the context of food marketing, the book appraises the potentials for the food marketing system, discusses the performance of various services, delineates important principles and concepts, and describes the trade practices that influence food purchasing patterns. The book was published by the Roland Press Company.

A text entitled *Matrix Algebra for the Biological Sciences* was published by Shayle R. Searle, associate professor of

biological statistics. The 296 page book is concerned with the understanding of matrix algebra and its application to the statistical problems in biology, biometry, and bi-mathematics in a manner clear to the person who has had no mathematics beyond high school algebra. Emphasizing the uses of matrix algebra, its style is relatively informal but proofs of underlying theory are included. The publisher is John Wiley and Sons.

Prof. Frank Kosikowski of the Department of Dairy and Food Science published a textbook entitled *Cheese and Fermented Milk Foods*. The book deals with all aspects of the production of foods from milk fermentation. Its simple and direct approach makes it useful to the student, the producer, and the person simply interested in learning something about these important natural foods.

A study describing how agriculture can be made to assume a more vigorous and vital role in increasing total national economic development was published by John W. Mellor, professor of agricultural economics. The book, entitled *The Economics of Agricultural Development*, presents clear guidelines for tailoring agricultural programs to specific conditions through the analysis of physical,



Prof. Frank Kosikowski

economic, political, and cultural factors. Mellor believes that agriculture must assume a larger role in national economic development and suggests many ways that it can be done through the establishment of institutions for research, education, marketing, and land tenure. The 448 page book was published by the Cornell University Press.

The Challenge of Genetic Mysteries

by SUSAN JONES '70

When a scientist becomes involved in the riddle of genetics he realizes that any finding may open Pandora's box of more complicated riddles. This does not deter one from meeting the challenge. For example, Dr. Henry O. Dunn, of the Large Animal Medicine, Obstetrics, and Surgery Department, New York State College of Veterinary Medicine at Cornell, looked at the basic techniques used to study genetic differences in human beings to see if the same could be successfully applied to cattle.

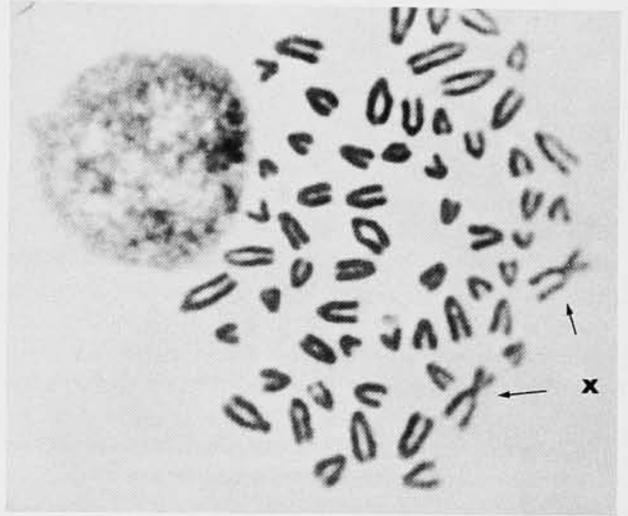
For instance, the chromosomes and genes have long been recognized as the factors which determine the characteristics of organisms. Scientists have been able to relate outward characteristics to certain specific chromosome patterns in humans. For example, a normal human being has 46 chromosomes, the genes of which control everything from eye color to blood type. When a pattern of 47 chromosomes appears, this pattern is indicative of a mongoloid syndrome, unless the forty-seventh chromosome happens to be a sex chromosome. In this case, other abnormalities occur. With new research methods, doctors can examine the fluid surrounding an embryo and determine its sex or whether it will be a mongoloid child when born. If the extra chromosome is found, the child is usually mongoloid. No matter which chromosome is the "culprit," it is not healthy to have any deviation from the standard 46. Abnormalities in stature, sex, and mentality are caused by such imbalances.

Dunn felt that the same procedures for determining genetic differences as the cause of abnormalities in humans might be applied with some success in his research with cattle.

"Freemartin heifers have been recognized for some time," Dunn said, but "the why" of the abnormality is the interesting thing. These freemartins have a fraternal twin which is male, and such heifers are masculinized and sterile. This condition cannot be produced experimentally, Dunn continued, and is considered unique to cattle and sheep.

Twin cattle differ from human twins in that their placentas often fuse, permitting blood to flow between the two fetuses. It appears likely that something in the bloodstream affects these females and that this "something" is a hormone of some sort. Research now shows that cells containing chromosomes appear to wander between the two individuals and that they become part of the new individual, since the freemartin possesses a "Y", or male, chromosome.

Dunn became interested in this phenomenon while working on the low fertility of a bull under study. At the time he discovered a female pattern in the bull, he did



This photomicrograph pictures an XX female cell which was present in the blood stream of the male being examined. The round mass at the left is a cell which has not broken into its chromosome pattern.

not know that it was a twin. Further investigation led him to his present project.

He has focused his attention on the male twin of freemartins. One bull under study had blood cells 85 per cent of which were derived from his sister, showing the typical XX configuration of the female. The rest were his own XY (male) type. This occurred primarily in the blood and bone marrow, not in the skin, so the bull looked normal. Closer examination revealed otherwise. Theoretically, a normal bull should be able to fertilize 1000 cows weekly. This bull's capacity was approximately half that of a normal bull. A sterile bull, twinned to a freemartin, is also under observation to determine the cause of his sterility.

Dunn hopes to gather information on bulls from all over the country. Similar studies are in progress in Wisconsin and England. Evidence thus far shows that some of the bulls are sterile and others are not as fertile as normal ones, yet they seem to produce normal offspring. If Dunn can show, through the study of the offspring produced by such bulls, that any have inherited blood factors from the freemartin, it will be the first time in history that sires have been shown to transmit the genes of their twin sisters.

Research is not directed at preventing the condition but at finding a good use for the bull twins of freemartin heifers, Dr. Dunn explained. Studies of this birth defect might yield clues to the study of other defects.

FACTS, FANTASY,

AND FREUD

by JOAN SOLOMON '67

"They're in my head and they pop up through my eyes — pop, pop — see, and then I see them."

Pre-school youngsters do not conceive of their dreams as expressions of unconscious desires, as releasers of instinctual pressures, or as meaningful psychic events. A child's dream is very real to him. He sees it going on before his eyes. He believes it completely.

Through the ages men have been fascinated by the distorted reality which dreams present. Since Sigmund Freud's interpretation of the dream as a "safety valve," a compromise between the need to express unacceptable feelings and the need for the body to rest, interest in the dream state has intensified. Researchers are presently attempting to test Freud's theory of dreams. Do dreams disguise our unconscious wishes? Are they, as Freud contended, the "guardians of sleep?"

Prof. Robert H. Dalton of the New York State College of Home Economics, Cornell University, has recently completed an intensive study of children's dreams. By interviewing youngsters in the two to five age bracket and those in the first two grades of school, he found that Freudian psychology does not explain the dreams of young children.

If dreams are really wish-fulfillments, as Freud maintained, why are nightmares so frequent in children? Dalton argues, "To call a terror dream wish-fulfilling when it merely represents the child's view of the world at a given time seems absurd. We may be quite certain that the child's life situation is treacherous when he awakens with a nightmare."

According to the Cornell professor, dreams are literally true to youngsters under six years of age. They are dreaming with their eyes events that are occurring on the outside. A three-year-old remarked, "Dreams come out of my head — all the way out and up to the ceiling." Another child said that her dreams came out of the clothes closet.

Dreams take on different meaning to children of different ages. They reflect the level of growth of the young-

ster. Dalton explains, "The child's dream is an expression of the particular stage of his development and experience. The content and symbolic structure of the dream reflect the level of physical, social, and intellectual development. The dream, therefore, mirrors significantly the questions, concerns, problems, and struggles which the child faces in his daily efforts to relate himself satisfyingly to his contemporary world."

Most of the dreams reported by the children took place in ordinary, regularly experienced, realistic settings. This is further proof that dreams have a direct relationship to



the behavior of the child. Dalton conducted a cross-cultural study to confirm this fact.

Dalton collected data from children in St. Thomas, Virgin Islands, as well as from Tompkins County, New York youngsters. Several differences in dream content were evident. Island children, who lived in shacks rather than sturdy homes, dreamed less often of buildings than did the children of Tompkins County. They often dreamed of water, as it is a precious commodity in St. Thomas. Bridges never figured in their dreams. There are none on the island.

The islanders rarely dreamed of their parents together, for about a fourth of families on St. Thomas have only one parent living with the child. Another significant finding is that youngsters from Tompkins County more often dreamed of manipulation of objects and physical contact with other people than did children from the island. Dalton attributes this to the cultural difference in acceptable sexual expression. In Tompkins County, children frequently attend parties and dances. Holding hands and kissing in public are approved, but pre-marital pregnancy has serious consequences. In St. Thomas, illegitimacy rates are high. Parties and dances are rare. There is little public kissing or love-making. However, unmarried mothers meet with little of the disgrace that is common on the mainland.

Thus, Dalton's findings do not substantiate Freud's claim that dreams represent unfulfilled wishes. They

point, instead, to the likelihood that dreams reflect average public behavior.

Another part of Dalton's study came up with an unanticipated finding. Sigmund Freud's idea that it is impossible for a dreamer to conceive of his own death was contradicted.

According to Freud, we cannot succeed in an attempt to imagine our own death because "at bottom no one believes in his own death . . . Our unconscious behaves as if immortal." And yet, in the Dalton study, 1.9 per cent of all subjects reported dreaming of their own death.

The death dreams were most common among very young children. Dalton explains that young children are helpless and feel vulnerable to attack, and thus can't ward off aggressive forces directed against them. Also, death is not real to the very young. In their play and fantasy, killing and being killed is a common form of activity.

More boys than girls reported having death dreams. This may reflect the greater protection girls receive in our society. Another possibility suggested by Dalton is that it results from the greater demands made on males to achieve. This leads to humiliation, guilt, and self-punishing thoughts.

A finding that puzzled the professor was that death dreams were more common among the high IQ children. He could not explain this on the basis of present knowledge. "The kinds of concerns, fears, hopes, loves, and hates to which a child is exposed probably will come closer to accounting for extreme self-punishment — death or suicide dreams — than our data can supply."

One subject, a 13-year-old boy, said he dreamed of a wildcat "that came sneaking out of the bushes, pounced and was on me. Soon it tore my body to shreds and slowly ate me."

A 16-year-old boy reported the following recurrent dream: "I am always a big football hero in this dream winning the game in a final 100 yard run with the ball. When the game is over, I get into a sports car and go riding around the city and towns in that area. I am also president of my class. I have the best clothes and a cute girlfriend. The dream usually ends up with my being killed with my girlfriend in the car by a truck."

A girl of 18 dreamed that she married two men. When they found out what she had done, she jumped on an untrained horse and headed toward a high bush and water jump. The stallion couldn't clear the barrier, and the girl's skull was cracked. She subsequently died, "laughing and happy to leave the unforgiving world."

Thus, these studies do not uphold Freud's notion of a continuously operating self-preservative instinct. Dalton concludes, "We need to take another look at the protective function attributed by Freudian psychology to the ego in dreams. . . . In the dreams reported in this study, impending death was not a sufficient stimulus to awaken the dreamer before death occurred."



A Champion Program . . .

Year-Round Baseball

by JAMES OLIPHANT '68

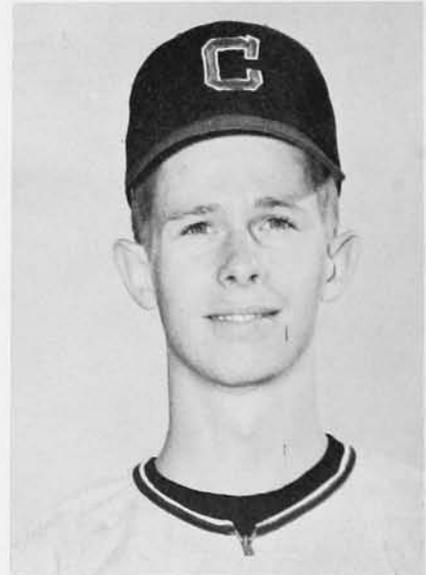
Baseball is played throughout the year, even on this side of Cayuga's waters. You're probably wondering how anyone could even think of walking outdoors, let alone play baseball, during Cornell's bitter and prolonged winter. But Ted Thoren, Cornell's head baseball coach, has instituted a fall-winter program which has helped build this season's team into a contender for the Eastern Intercollegiate League title.

This program began in the fall of 1961, when Thoren decided to build baseball into one of the top intercollegiate sports played at Cornell. A five-week fall practice session was held for students wishing to continue their summer baseball playing. The fall session's main purpose was to create an interest in Cornell's forgotten late-spring sport. Little did Thoren realize his idea would germinate into a full-scale, outdoor-indoor, instructional baseball program. For throughout 1966, over 20 students participated in an outdoor fall program conducted on Hoy Field from September 25 to October 27, and an indoor instructional program conducted on the Big Red's indoor-baseball diamond in Bacon Cage from January 9 to February 13.

When speaking with one of the players, I sensed his satisfaction in being able to play baseball all year round. James Ruff, '68 Agriculture, relates, "I had little hope of making the team prior to my participation in the fall-winter program. But 11 weeks of outdoor-indoor practice has established me as a candidate for a position at shortstop."

Thoren believes the ability of the fall-winter program to turn players like Jim into potential starters rests in the hands of James A. (Bucky) Freeman. Freeman, former Ithaca College varsity baseball coach, is advisor to Cornell's baseball team. In 33 years of coaching, he has

sent his teams to five Eastern District II playoffs and to the 1962 National Collegiate World Series of Baseball. The players find his instruction and guidance throughout the fall-winter program invaluable. James Purcell, '68



James H. Ruff '68, has maintained a cumulative average of 3.24 as a major in agricultural engineering.

Arts, starting pitcher for Cornell, comments, "Throughout the fall-winter session, one has the time to concentrate on correcting one's weaknesses. But many players cannot see their mistakes and need the expert guidance of a man like Mr. Freeman. Bucky, in an 11-week period, can criti-



Here in Hoy Field the Big Red Nine will play their home games this spring. On April 8, the scoreboard will record the first game for this season.

cize constructively and build the players' confidence and ability to play baseball."

But if Jim had any weaknesses to correct this past fall, they certainly were not evident last season when on May 13, he shut out undefeated league leader, Army, 4-0 on a four hitter. The following week, he was selected the Eastern Intercollegiate League "Player of the Week" and has since been approached by the New York Yankees, Chicago White Sox and the Detroit Tigers. Though Jim is considering a professional baseball career upon graduation, his main concern at this time is to help this year's team capture the league title. "If I can apply the skills I've developed under Mr. Freeman's instruction, I know I can help the team win the title. But, the thing that will put Cornell on top is Coach Thoren's winter program which has developed six or seven mediocre players into potential starters who will adequately fill the spots vacated by last year's graduating seniors."

Though the fall-winter session is invaluable, the real test of a team's ability comes in its performance under game conditions. By April 8, when Cornell plays Rochester in the first home game of the 1967 season, the Big Red will have completed their spring trip, playing 11 games against some of the stronger teams in the eastern leagues, such as North Carolina State and Long Island University. The purpose of an extensive spring trip is to give each player adequate game experience and enable Thoren to observe and organize his squad for the ensuing Eastern Collegiate competition.

How does Thoren view the '67 campaign? "To improve, one must play baseball. Our fall-winter instructional session, coupled with a solid spring trip, has given each player the opportunity to improve and make this year's team a success."

So, when Cornell's snow and cold winds finally cease, we will anxiously await the appearance of the Big Red

Nine, who, after a year of outdoor-indoor practice, will be eager and ready to begin their campaign and hopefully capture the Eastern Intercollegiate League title.

1967 VARSITY BASEBALL SCHEDULE

APRIL

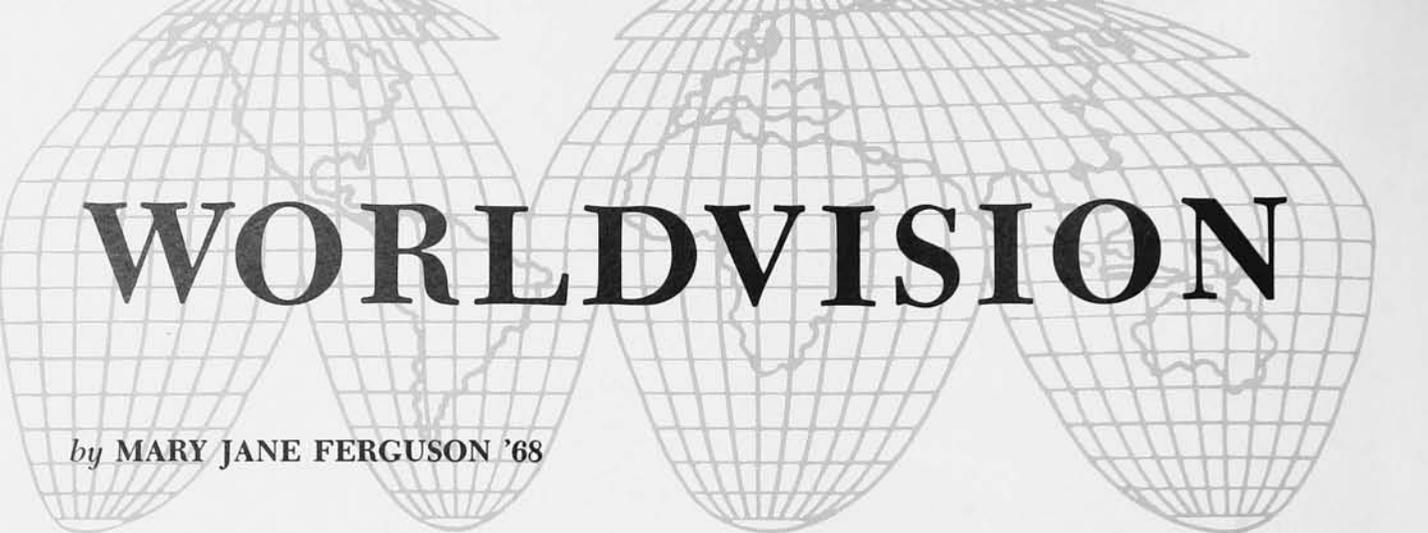
April 8	Sat.	Rochester	Home °°
April 11	Tues.	E. Stroudsburg	Home 4:15 P.M.
April 12	Wed.	Cortland	Away 3:30 P.M.
April 15	Sat.	Columbia °	Home 2:00 P.M.
April 18	Tues.	Colgate	Home 4:15 P.M.
April 21	Fri.	Harvard °	Away 3:00 P.M.
April 22	Sat.	Brown °	Away 2:00 P.M.
April 26	Wed.	Syracuse	Home 4:15 P.M.
April 29	Sat.	Pennsylvania °	Away 2:00 P.M.

MAY

May 1	Mon.	Colgate	Away 3:30 P.M.
May 3	Wed.	Yale °	Home 4:15 P.M.
May 6	Sat.	Navy °	Home 2:00 P.M.
May 11	Thurs.	C. W. Post	Home 4:15 P.M.
May 13	Sat.	Army °	Away 2:30 P.M.
May 17	Wed.	Syracuse	Away 3:00 P.M.
May 19	Fri.	Princeton °	Home 4:15 P.M.
May 20	Sat.	Scranton	Home 2:00 P.M.
May 23	Tues.	Hartwick	Home 4:15 P.M.
May 27	Sat.	Dartmouth	Home 2:00 P.M.

° Eastern Intercollegiate League Game

°° Doubleheader



WORLDVISION

by MARY JANE FERGUSON '68

"Present fantastic, future unlimited!" With these words, Harvey Jacobs concluded his lecture on "The ABC Worldvision." Jacobs, the advertising, public relations, and sales promotion manager of the American Broadcasting Corporation subsidiary ABC International, spoke of ABC's activities in the rapidly growing field of international television, supplementing his talk with a film presentation and several brochures.

His talk was the first in a series of lectures sponsored by the Department of Communication Arts in the New York State College of Agriculture. "We're trying to get an overview of the media throughout the world," explained Royal D. Colle, professor of international communications. "Mr. Jacobs, a representative of one of the leading organizations for international television, has just returned from two world tours. He probably knows best what's happening in the area of television."

And according to Jacobs, much is happening. In 1958, with the advent of Score, one of the first communications satellites which transmitted both voice and telegraph messages to the earth, people at ABC began to realize that international television linkage could at last become a reality by using orbiting satellites as relays. ABC International was formed in 1959 and it later formed Worldvision, an organization of international, independent commercial television networks.

Four years ago they began to offer practical assistance to nations forming new television stations or trying to improve existing facilities. Today the program claims over 60 television stations in 27 nations, including Japan, Ecuador and Lebanon. These Worldvision stations serve more than 17 million international viewing homes.

In the United States, television rapidly became one of the most effective selling medium. In 1966, the top one hundred corporations spent the major portion of their advertising budgets on television time, realizing that over 70 million television sets reached more than 50 million American homes to sell their products.

Keeping this in mind, ABC International set out to interest the international businessman in its possibilities. In every nation visited, Jacobs reported, the people responded immediately by fitting television to their individual goals and needs. Japanese businessmen, for example, realized the potential for increasing their export market and their influence via international television.

In addition to the possibilities for increasing and improving trade relations throughout the world, international television also offers possibilities for developing nations. Even with only one television set per village, exposure to a modernizing world, as well as to the concept of belonging to a nation-state which is attempting to industrialize, may very well stimulate the desire and push needed for progress to occur. Countries are aware of the powerful impact of ideas flowing from a television screen, as is exemplified by the many government controlled stations.

Perhaps the most obvious possibility for international television is live broadcast of world events. Ever since the first program via Telstar on July 23, 1962, the world viewing public has had the opportunity to see many live specials from all over the world. Seeing on the spot coverage of important news events like the funeral of Winston Churchill or sports events like the 1964 Summer Olympics at Japan has made the world smaller for television viewers everywhere.

Less obvious but just as exciting as live news coverage are the possibilities in the medical, academic, and professional fields. For example, television was used in 1963 to send an electroencephalogram, a picture of a "brain wave," from London to the Mayo Clinic in Minnesota for quick diagnosis.

And more and more exciting possibilities are opening in business, government, and nearly every phase of human life for international television, which, as Jacobs pointed out, is literally bound "to change the face of the earth."

Basketball: A Good Year

Special to the Countryman

The 1966-1967 basketball team presented Cornell fans with some of the finest exhibitions of basketball in Cornell's history. Possessing more style, color, and finesse than the 1965-66 team, Big Red rolled up an impressive 19-5 record. To reflect on some of the highlights: Cornell beat Kentucky at Lexington, Butler at Indianapolis, and Princeton (sixth ranked in the nation) in Ithaca. All three of these teams are perennial national powers. Kentucky has won more NCAA champions under the auspices of Coach Adolph Rupp than any other team.

Cornell finished tied with Yale for second place in the Ivy League.

What are some of the thoughts and reflections of the members who played on this year's team?

"On a team such as this," said Captain Blaine Aston, "usually the regulars are the ones who receive all the glory and publicity. I often wonder what motivates and keeps the second string ball players giving 100 per cent each day in practice — but yet they play so very little. It's people like this, with their desire and will to win, who help develop a winning basketball season."

Gabby Durkac, a regular, reflected upon this season's record: "This team had more spirit than last year's team. We had only one regular returning, and our tallest man was 6'5". These are handicaps, but we overcame them. I think each one on the team gave his best when he was on the floor. This develops a winning spirit and a winning team."

Tom Bobenread is a senior who saw limited action as a sub. "The thing I remember most about the season," said Tom, "is the fact that no one expected us to do anything — we almost ended up a national power."

Aston, Durkac, and Bobenread graduate this year. What are some of the comments by those who will be the nucleus of next year's team?

"I get tired of hearing 'Wait 'til next year,'" said Gregg Morris, the only junior on the team. "We came so close this year. I've looked at some of the teams that played in the two post-season national tournaments. There were quite a few we could have trounced. The best part of this year's team was the defense.



The basketball team compiled a record of 19 wins, 5 losses. The players (from left to right) are: 1st row — Cliff Sessions, Gregg Morris, Blaine Aston, Coach Sam MacNeil, Tom Bobenread, Gabby Durkac, and Mike Pope; 2nd row — Manager John Monroe, John Sponheimer, Walt Esdaile, Gregg Otto, Hank South, and Trainer Tom McGory. The Cornell Mascot is Dan Mackesey.

"Superb" Herb, a nickname given to sophomore Hank South, believes that the game he remembers most is the Kentucky game: "The crowd finally ended up cheering for us; something we were unaccustomed to at that time of the season. The fans treated us just like kings. After that game, we played like kings."

Walt Esdaile had a few words to say. "It's hard to say what I remember most about the season — only that it was very long. Last year we had the Quakers (Penn) take the Ivy League; this year we had the Tigers (Princeton); next year, I believe it will be time to resurrect the Bear. This year we worked hard; next year we will work harder because second place is becoming a too familiar position."

Morris, Esdaile, and South were starters. They were the three leading rebounders and scorers. The remaining team members are Cornell's illustrious "Bandidos." These are the second string players who receive the task of guarding Morris, South, Esdaile, Aston, and Durkac in practice.

John Sponheimer, "co-captain elect" of the Bandidos, believes that: "This year's team had more pride. My only regret is that we were unable to go to the NIT after we lost to Princeton."

Mike Pope, sophomore, considered every game after Kentucky very important. "We didn't want people to think that it was a fluke or a gift of fate. Everyone gave his all when he was on the floor — that's the only way to win."

Gregg Otto is a sophomore, also. He started in a few games, and his actions in some were impressive. "Cornell has finally adopted a winning attitude. If we keep it up this way, we will end the Princeton dynasty — and bring Cornell another Ivy champion."

If Cornell exhibits any of the tenacious desire and tremendous ability next year that they exposed to Cornell fans this year, they will take the Ivy League.

Second place will only be a letdown next year — It has to be first place.

COUNTRYMAN CAPSULES

Prof. Alvin A. Johnson is resigning his position as director of Cooperative Extension at the New York State Colleges of Agriculture and Home Economics to become the Ford Foundation's program advisor and team leader for agriculture in India. He has been head of New York State's Cooperative Extension program since July 1962. During that time, Johnson led a study and reorganization of the Extension program in the state. Under his direction, new pilot programs at the regional and county levels were aimed at strengthening commercial agriculture and stimulating employment.

In his new position, Johnson hopes to assist with India's pressing food problems. "I feel I cannot walk away from the challenge of working where the action must be to help solve one of mankind's most compelling problems — the world food shortage," he said. Deans of both colleges expressed their regret in losing the director, but cited his outstanding contributions to the Extension program.

"Population explosions and two years of drought in India dramatize the impending food crisis," Johnson said, "but policy and technical developments show promise for the future. Two words — food and people — will be all pervasive in the years ahead."

Cornell's exchange student to Argentina is Frank Zadroga, '68, a wildlife conservation major attending the University of Buenos Aires. He recently sent us a letter explaining the interesting way in which exams are conducted there. Here are some excerpts from his letter.

"All the finals are oral, so the manner of studying is to get together with a friend and 'argue.' The students go through all of the notes once or twice, and then begin to quiz each other, as the professor will during the final. Each course has two or three dates for the finals, and from these the students can choose the one that will be convenient for them. In this way they try to space their exams so as to have seven to ten days to prepare for each one. . . . In that way it is much easier to take tests down here, but the fact that they are oral makes it more demanding.

"Each course has a program with all of the points that the students have to know for the final. When the student takes the exam he chooses two 'bolillas' which are cards with a selection of those points that he has to know.

He can have a lot of luck and choose easy 'bolillas,' or he can have bad luck and choose hard ones.

When the student enters the testing room, he sees two or three professors behind a long table. When his name comes up (they take the exam alphabetically), he takes a seat and has about a half-hour to prepare a short outline from which he is going to talk. As the student is developing his points, the professors cut in and ask him questions.



Frank Zadroga '68

This system is excellent in my opinion since it develops a sense of security and self-control in the students and teaches them to express themselves clearly and precisely. It eliminates the pressure that is put on the student that at times results in cheating. In this oral system, the professor knows at once if the student understands the material. . . . I would like this type of system to be used more at Cornell, and I think it would be best applied in a mixed oral and written type of exam. It's something to think about. . . ."

Memories for the Alumni

ON THE CAMPUS

40 YEARS AGO

THIS MONTH

It was a social month. According to the April *Cornell Countryman*, "The second annual Barnyard Ball was held in the Old Armory. The event had been long heralded by linoleum cut posters and variously colored rustic 'mimeos' which decked the hill from Morrill to the University stables. On the day preceeding the affair, spirited aggies came to class in their farm clothes, and on the day of the dance most of them joined in a hilarious careening hay ride across the main campus at noon, singing many of the old country songs, beating a drum, and calling all the cows and chickens in creation."

And in a capsule titled "Champion Chirper Wins China Egg," the *Countryman* reported: "Professor Rice led the chicken calling contest which he preceded by a masterful demonstration. Many anxious chicken calls answered him from the floor. . . . Professor Rice commented that some of the calling was more enticing to ducks than to chickens. First prize was awarded to P. B. Gurney '27 on the ground that his calling was the most modern, since all the chickens in his flock were named."

Not to be outdone, "Professor E. S. Savage of an hus judged the cow calling contest. His own exhibition of 'come boss, come boss' was clear

and strong. . . . M. 'Mac' Glazier '27 won the prize, a pint bottle of milk, with a contortive expletive call that was as expressive as it was silent."

"A farm management party for all in the department was given in Sage gymnasium. About 120 people attended and were entertained with games, a pantomime depicting the life of a grad student, and with dancing."

Another note from the *Countryman*: "To four of the present seniors who will next year say, 'We are the grad students with pocketbooks thin, We return to Cornell more dollars to win,' the forestry department offers some financial encouragement. Two assistantships worth \$750 each and two worth \$500 each are available. . . ."

And the *Cornell Daily Sun* reported: "Alumni of the class of 1901 set up a \$6,000 fund for Chinese students at Cornell in memory of classmate Willard Straight."

And in basketball, the College of Agriculture team beat the students of Electrical Engineering and Architecture, but lost to those in Mechanical Engineering, Law, and Arts.

Forty years ago, professors of this College were also busy writing books. According to the *Countryman*, Liberty Hyde Bailey, former dean of the College of Agriculture, had written over 20 books, besides editing the Rural Science Series, Rural Textbooks Series, Rural Manuals and open country books.

And A. R. Mann '04, then dean of the College of Agriculture, wrote a book called *Beginnings in Agriculture*. This book was one of the Rural Textbooks Series.

Rude Rural Rhymes, a book of "whimsical rhymes dealing with agriculture and country life" was written by R. M. "Bob" Adams, assistant extension professor of vegetable gardening.

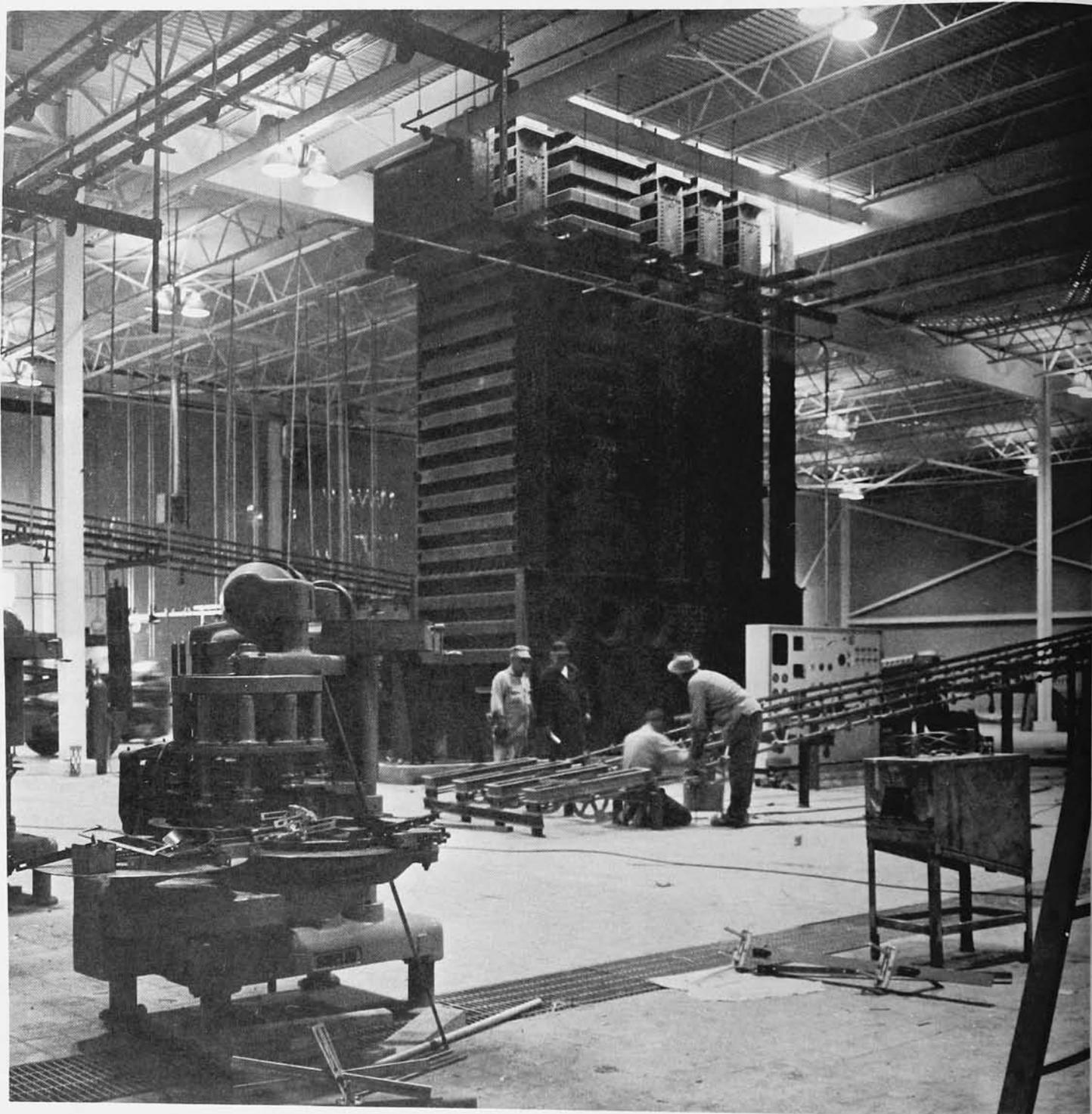
Miss Martha Van Rensselaer, Miss Flora Rose, and Miss Helen Canon collaborated on a *Manual of Home-Making*, offering "some ideas which can be followed in making the home a place for the family to live a thrifty and happy life."

H. H. Wing '91, head of the Department of Animal Husbandry, wrote a book called *Milk and Its Products*, and B. F. Warren '04, professor of farm management, wrote the popular text *Farm Management*.

PICTURE CREDITS

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THIS IS AGRICULTURE?



DEFINITELY!

A new food processing plant recently built at Geneva, New York, (photo) is part and parcel of modern agriculture. In fact, if you work in New York State, chances are one in three that you are part of the chain of services that brings food to the State's 18 million residents. One of our functions is to strengthen this chain — from farmer to processor, to distributor, to retailer, to consumer.

Working along with today's commercial farmer in the Empire State are 2,500 firms that sell him almost \$800 million worth of raw materials and services each year; 70,000 firms transport, process, and package farm products — a \$2 billion a year industry that employs more than 200,000 persons. Each of these industries depends for its health on the strength of the others.

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Ellis Room

CORNELL COUNTRYMAN

VOL. LXIV

MAY, 1967

NO. 8



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ON THE COVER

Orville L. Freeman, United States Secretary of Agriculture, appears on the cover as he addresses the Agricultural Leaders Forum. Freeman spoke on rising food prices and later in the day he participated in a question and answer period with Cornell students.

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CORNELL COUNTRYMAN

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A Step Forward

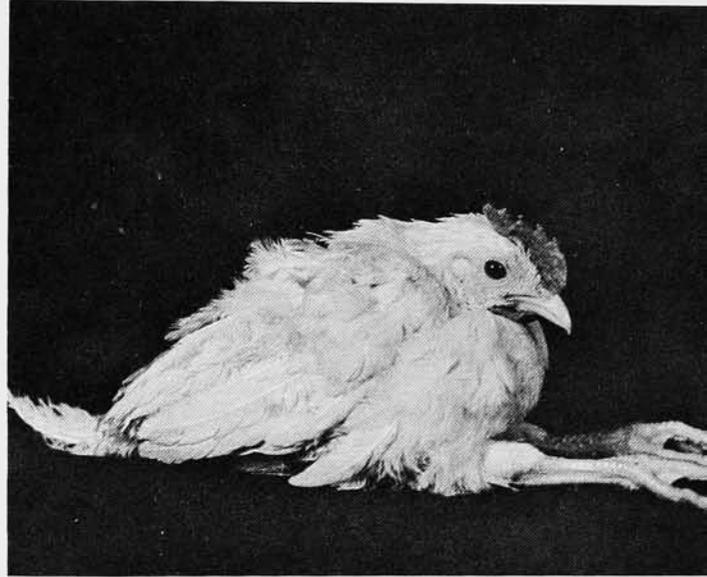
by BROOKE C. BRESLOW '68

Human muscular dystrophy is a disease involving the deterioration of the muscles, and resulting in death. It is a dread disease for which there is no known cure in humans. Professor Milton L. Scott, an animal nutritionist in the Department of Poultry Science of the New York State College of Agriculture at Cornell, has been studying the causes of a muscular dystrophy in chickens which can be produced by certain nutritional deficiencies. By understanding muscle metabolism in chicks, it may be possible to gain a better understanding of muscular dystrophy in humans.

Dr. Scott is conducting a research project in muscular metabolism under a grant from the Muscular Dystrophy Associations of America. He has been working on this program since 1953. His recent research has pointed to important relationships between selenium, vitamin E and sulfur amino acid metabolism, and the prevention of muscular dystrophy and other nutritional diseases caused by a deficiency of vitamin E. For his work in this area, Dr. Scott received the Borden Award for 1965.

Originally, he was interested in the metabolism in chicks of the fat soluble vitamins, particularly vitamin E. He discovered that chicks suffering from a vitamin E deficiency may develop one or more of three specific diseases — encephalomalacia, exudative diathesis, and nutritional muscular dystrophy. There is no common cause for these diseases, but rather an interrelationship of metabolic defects. The addition of a synthetic antioxidant to the diet prevented the encephalomalacia, a brain disorder, but was not effective in preventing exudative diathesis which is the accumulation of excess fluids under the skin and in the body tissues. By adding vitamin E, or selenium to the chick's diet, this disorder is also cured. Muscular dystrophy appears when the diet contains an antioxidant and selenium, but is deficient in vitamin E and cystine, a sulfur amino acid.

A **dystrophic chick** shows a degeneration of the breast muscles. Dr. Scott has been able to both induce and cure muscular dystrophy in chicks. He has found that vitamin E is important in poultry nutrition, the prevention of encephalomalacia, interacting with selenium for the prevention of exudative diathesis, and acting with both selenium and cystine for the prevention of nutritional muscular dystrophy.



A chicken suffering from a Vitamin E deficiency and showing the symptoms of encephalomalacia.

Research in the Department of Animal Science at Cornell with lambs and calves has shown that these animals develop a muscular dystrophy when fed grains and forage grown on lands low in selenium content. It would seem that the addition of selenium to the soil would remedy the situation, but selenium, even though essential to life, is highly toxic in minute quantities. The present method of control of "white muscle disease" is the injection of small amounts of selenium compounds.

Dr. Scott's research on chicks and the research being conducted on lambs and calves are valuable for two reasons. These programs are helping to raise the quality and efficiency of production of meats and eggs by alleviating the impact of these nutritional deficiency diseases. But muscular dystrophy in chickens, lambs and humans is similar in many aspects. A cure for dystrophy in chickens and lambs does not mean a cure for dystrophic humans. It does mean a better understanding of muscle metabolism, of nutrient requirements and of the nature of the disease. It means a step forward.

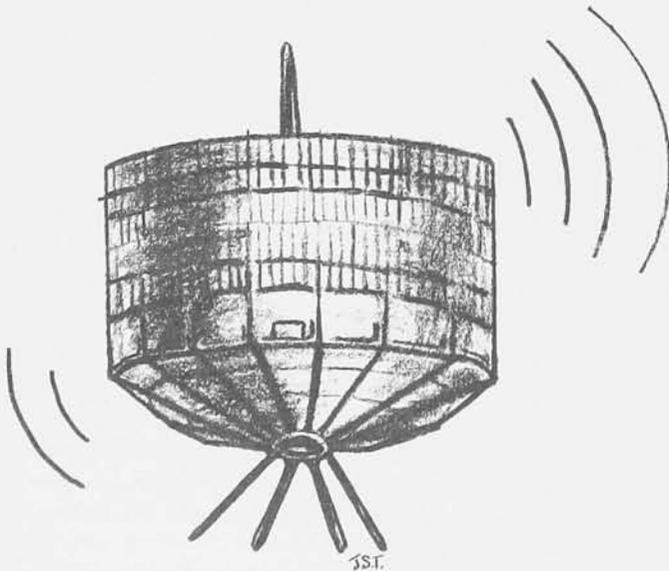
Understanding Through

Russian Journalist Speaks at Cornell

by CHARLES WILSON '69

The Department of Communication Arts in the New York State College of Agriculture at Cornell has constantly been striving to develop its courses in the communication systems of foreign nations. Guest lecturers in the past have been invited to speak to the students in these classes. The Department then decided that the information provided by these speakers should be opened

A copy of the television communications satellite slated for uses which will facilitate worldwide television.



to a larger audience. As a result, the lectures were opened to the general public. This spring the lecture series consists of five different lectures. One of these was concerned with mass communication in the USSR.

The speaker, Mr. Boris Sedov, the Second Secretary of the Embassy of the USSR in Washington, received his degree in economics at Moscow University. He has worked in the United Nations office of public information, the news agency Tass, and *Nosvesti*, another Moscow news agency. He was also an editor of the magazine "Soviet Life." When the Communication Arts Department contacted Mr. Sedov at the Russian embassy he expressed great interest in coming to Cornell.

Most of Mr. Sedov's lecture was concerned with television in the Soviet Union. He emphasized the fact that television in the USSR began to increase in importance after World War II and is now a vital part of mass communication in the Soviet Union. Another important point was that television there is similar in many respects to television in the United States. There are, however, two unique problems encountered by Russian television.

The first of these problems is that of the vast area of the Soviet Union. Huge distances are involved in the broadcasting of television programs. This problem is made worse by the fact that the population is unevenly distributed throughout the area. There are very crowded centers of populations and large, sparsely populated areas. This makes it difficult to construct a big network which will reach all of the population. The use of satellites in television broadcasting may help to solve this problem in the future.

The second major problem is the number of different nationalities and languages in Russia. There are 120 different languages spoken in the USSR. This presents obvious difficulties in trying to provide television for all.

Communications

Retranslations of programs are used but this is a costly and time-consuming process. At present there are 135 television centers which, although they cover many languages, have their limitations.

In the Soviet Union there are three kinds of television networks. The Central Network in Moscow covers 120 cities and takes in approximately 150 million people. The local networks are located in other large cities and they broadcast to the big republics of Russia. The third network is involved solely in educational broadcasting.

Television programming according to Mr. Sedov has as its specific aim the cultural and intellectual educating of the Russian people. This programming is divided into three types—news, amusement, and educational. The news broadcasts are given in the form of five daily bulletins and daily news programs such as “The World Today.” News of the Russian theatre and ballet is also given regularly. Educational broadcasts include televised lectures, documentaries on the achievements of Russian scientists, and special programs for housewives such as “You and Your Health.” Amusement programs are very well received and amazingly enough make up about sixty per cent of all programming. The most popular of these are the audience participation shows, one of which is similar to the “College Bowl” program in the United States.

Television in the USSR is especially effective in dealing with children. Children’s programs, such as plays, reports, and documentaries, are designed to help them with their studies in school. Recent polls show that Russian children are spending 24 hours a week before the television set. This means that children can be given real knowledge through television by the use of specially designed programs.

Televisions are possessed by about twenty million families in the Soviet Union. This means that about fifty per cent of Russian families have television at this time. All networks are financed by the government. Mr. Sedov stated that there is very little use of advertising in television or any other media. The growth of television is symbolized by the building of a new, larger center for the national network in Moscow. This will provide more studios and more extensive facilities for color television broadcasting.

After Mr. Sedov finished lecturing he answered questions concerning television and the other parts of the Soviet mass communication system.



Boris Sedov is former editor of Soviet Life, a magazine published and distributed in the United States by reciprocal agreement between the governments of the United States and the Soviet Union. By this agreement, the United States distributes the magazine America in the Soviet Union. Pictured here is the cover of the tenth anniversary issue.

During Mr. Sedov’s stay at Cornell, he spent many hours talking with experts on Asian studies. In discussions with Profs. John W. Lewis and David P. Mozingo of the government department, he expressed great interest in American views of Chinese attitudes and policies.

The lecture series has proved to be an excellent means for gaining knowledge and challenging ideas. The diversity of mass communication in the world makes these lectures fruitful for both the visiting speakers and the listeners.

Editor’s Note: Boris Sedov was one of the speakers in the Mass Communication Lecture Series sponsored by the Department of Communication Arts during 1967. Other speakers in the series: Harvey Jacobs, ABC International Television; Jiro Tokuyama, Normura Research Institute of Technology and Economics, Japan; Harish Chandra Khanna, Deputy Secretary of the Ministry of Information and Broadcasting, Government of India; and a representative of the Embassy of Nigeria.

FREEMAN AT CORNELL

by BRADLEY BERTHOLD '68

United States Secretary of Agriculture Orville L. Freeman gave a rare opportunity to several Cornell students when he was on campus to address the Agricultural Leader's Forum. The Secretary held a special question-and-answer session with the students at the conclusion of a press conference held for local newsmen.

The reporters were asked to leave before the session started so the students and Mr. Freeman could speak more freely. The students came prepared for the occasion with several pointed questions.

One student asked about recent reports that the Department of Agriculture was spending more than \$210,000 this year advertising American cigarettes abroad, at the same time the United States had required domestic cigarette manufacturers to put warnings on their packs regarding possible health hazards involved in smoking.

"How can we promote American cigarettes abroad at the same time we're warning our own people that smoking may be harmful?" the questioner asked.

Freeman explained that his department, which allocated the funds for the advertising, was using what he called "soft money." This is money owed the United States by a given country, but which is in that country's currency and must be spent there.

"We're advertising in countries where cigarette smoking is legal," Freeman noted.

"If, say, the Japanese want to smoke, we figure they might as well smoke American cigarettes."

The student inquired as to the morality of such a position.

"If you're considering morality, think of the problems of the small tobacco farmers in Appalachia; there are thousands of them there," Freeman said. When asked if there might not be a "more constructive use" of advertising money, Freeman ventured that the amount of money being spent was "really an insignificant amount," and was "not that important."

Another student asked the Secretary about some aspects of the government's farm programs and reported criticisms of the economics involved.

"Agricultural economics and modern economics are two different animals, and they ought not to be equated," Freeman exclaimed. (The Secretary missed a meeting with

economists because he extended his discussion with the agriculture students.)

"I know several eminent economists, and when it comes to farm economics, they take out their dog-eared copies of Adam Smith which they got in Economics 6 in college," Freeman said, protesting such critics.

In explaining the goals of the farm programs, Freeman said they were "not aimed at the little farmer."

"They're designed to make American agriculture work.

"They're not relief programs, but commercial farm programs, and were never designed to be anything else. But they may help the little farmer to become large enough to earn a decent standard of living, or help him through off-farm income," he noted.

"Then how do you justify keeping the little farmers in business," asked another student.

"I don't," was the reply.

"We're doing everything we can to help the little farmer, but the commodity programs were designed for commercial farmers," Freeman said.

"But, many of the little farmers should stay where they are — they're boxed in — there's nowhere for them to go," Freeman explained in pointing out the predicament of some small farmers. In this sense, the Secretary said, the Department of Agriculture is a part of the "poverty program."

"If the little farmers do stop farming, what will happen to the family farm values and way of life?" asked another student.

"We're hung over with a lot of antiquated traditionalism, and this is very difficult in the political arena. They can still throw the old labels at you," evidently referring to critics who say the demise of family farming is eroding American values.

If many of the little farmers did leave farming, the Secretary ventured, the economy would be better off if they could find other jobs.

Another question involving economics had to do with the surplus problem.

"Wheat we can give away," Freeman said. "However," he added, "our wheat surpluses are at minimal levels. But corn is the real bedrock of our economy. Corn we produce more efficiently than anything else. And not many countries use corn as we do here."



United States Secretary of Agriculture Orville L. Freeman at the Agricultural leaders forum was confronted by several puzzling questions. But Freeman's rhetorical style helped him stay in command of the situation.

If the farm programs were eliminated, "we would have corn and cotton in large surpluses right off the bat," Freeman said.

"But why are we diverting acres from production with our farm programs when there are people starving in the world," another student asked.

"We couldn't pay for the distribution of all that food," Freeman said. "It would be an enormous volume to move logistically — we can't move it or distribute it without a big investment, something like ten billion dollars."

But even if this country could distribute all the food it could grow, the Secretary said, "we would be defeating our purpose, because we would be discouraging other countries from developing their own agriculture. Population increases would soon catch up with us anyhow."

"The only way we can win the war on hunger — we can't do it ourselves — we can't produce enough — is to teach others to help themselves. They've got to do in 15 years what we did in 100," Freeman warned.

"As President Johnson said," Freeman quoted, "'Outside of world peace itself, the greatest problem is war on world hunger, and as of today we're losing that war.'"

Freeman said nations are more than ever before, beginning to stress the importance of agriculture. "No country in the world has ever made a success without a solid agriculture," he maintained.

Many of the Communist nations are having trouble with their agriculture, Freeman noted. "Marx was a city boy," he said. "The Marxists, socialists, Fabians, or whatever you want to call them, they've made a mess of their agriculture."

Freeman stressed the increasing role agriculture is playing in our foreign commitments.

"Agriculture is moving to the top of the totem pole in our aid programs," he said.

"A year ago, there were no people from the United States Department of Agriculture assigned to Vietnam. By July of this year, we'll have 100 people there," Freeman told the students. He also mentioned plans for increases in the number of people the department was sending to India.

In the press conference before the meeting with students, Freeman was asked about the milk withholding actions by the National Farmers' Organization and possible effects on milk prices.

"Farmers, like anyone else in a free nation, have the right to organize and withhold their product from the market lawfully, as long as they do not violate the rights of others," Freeman said.

"The dairy farmer is the most undercompensated segment of American agriculture," Freeman ventured. He said dairy price supports will be higher this year than last, but said, "dairy prices are still far too low."

Freeman said we should keep in mind that our food costs as a percentage of income are the lowest in the world. "The consumer should be prepared to pay a little more now," he said, "so he won't have to pay a lot more in the future."

Consumers do seem to realize better the plight of the farmer, according to Freeman. "The housewives' boycotts weren't directed at farm prices. This shows better understanding," he said.

"What is the general feeling in agriculture?" a newsman asked.

"The expectations in agriculture are rising," Freeman stated. "There are new programs and new conditions. There is no surplus, the market is jumpy and excited," he said.

"The income improvements, elimination of the surplus, and talk of the world food crisis led to the increased expectations," Freeman explained. "But," he cautioned, "prices have sagged somewhat this year. Farm income will hold as last year, but that isn't good enough. I'm not satisfied, and the farmers aren't satisfied."

But most of the students, having had a chance to question Secretary of Agriculture Orville L. Freeman, left the discussion very satisfied, having spoken face to face with a government official concerned with the problems students in the New York State College of Agriculture are studying.



After the newsmen were asked to leave, Freeman talked more freely with students from the New York State College of Agriculture. Sitting with Freeman is Kenneth C. Colling, president of the agriculture student council.

Freeman responds to a student's question as Colling looks on. Freeman so enjoyed talking with the agriculture students that he stayed longer than scheduled with them.



Secretary of Agriculture Orville L. Freeman addressing the Agricultural Leaders' Forum last March, as Cornell University President James A. Perkins looks on.



Radio, television, newspapers, and even the movies had men covering Freeman's press conference, which was held in Statler Hall. The movie man is from the radio and television film center at Cornell.



Freeman taking a question from a newsman at the press conference held in conjunction with his visit to the Forum. Professor William B. Ward, head of the department of communications arts, is at left.

Freeman, George Haefner, vice president for the northeast region of the National Association of Farm Broadcasters (center) and Prof. W. B. Ward (right), head, department of Communication Arts, enjoy a moment of humor.



References by Wire

by JERRYANNE TABER '67

A web of special telephone lines spun across New York State and linking 14 libraries into an experimental network has become an essential element in a program for catching a curious victim — time! The system of which this web is such an integral part is the Facsimile Transmission Pilot Project, which is currently providing more rapid access to intrastate library resources and faster servicing of intrastate library requests.

The **FACTS operation** centers around a process suggested by its formal title — that of facsimile transmission. The special telephone wires and equipment installed in each of the participating library stations furnish the communications network which transmits copies of requested materials in a matter of minutes. The **FACTS project** is designed to make these quick copies available to serious researchers for whom the time factor plays an important role. People who have experienced inconvenience or interruption in research progress as a result of the normal 10 day waiting period for regular interlibrary loans now find that **FACTS operations** attempt to fill their requests within 24 hours.

When a request for material by the **FACTS method** is received by one of the library stations it must include the name, author, date of publication and page or pages of the article sought. A check is then made of that station's own resources to make sure the requested material has not been overlooked. If it is not found, the **FACTS operation** begins. The request is teletyped to the New York State Library at Albany, the center for the **FACTS project**. If the State Library does not have the item itself, it sends the request to other library stations in the system. Once the material is located, the station placing the request is notified and awaits the facsimile transmission from the source of the original copy.

The **facsimile apparatus** is capable of producing quality copies of photographs, illustrations and graphs as well as strictly printed pages. The Xerox machine, however, cannot reproduce items of graded shades and contrasts clearly, and thus restricts some pages of photos and drawings which must be xeroxed for use by the facsimile process.

The project's experimental nature requires that some limitations be placed upon who is eligible for **FACTS services**. Participating libraries located in an academic community such as Cornell's library system, restrict **FACTS use** to faculty, graduate students working on

theses, and undergraduates working on honors theses, with occasional exceptions in unusual cases. Applicants are further screened according to the importance the time element plays in their request for materials. It is a general requirement that the material desired be needed for use within a week. This qualification is necessary for an accurate measurement of the project's effectiveness as an additional service to regular interlibrary loans. If there were no screening according to time needs, there would be no way to evaluate the system's potential and the possibilities for expansion.

Cornell's expansive library resources make the University Library a prominent participant in the **FACTS program**. The University's role in the project is administered by the Reference Department in Olin Library, which maintains three facsimile receivers, three transmitters and three open telephone lines to Albany for actual voice communication. The latter allows for discussion of transmission problems or other related matters as the copy itself is being reproduced. The costs of equipment and maintenance of extra personnel are underwritten by a grant to the University as a **FACTS participant**.

Among the other libraries taking part in the project are the New York State Library at Albany, the New York Public Library in New York City, the Buffalo and Erie County Public Library in Buffalo, the Pioneer Library System in Rochester, the Nassau Library System in Hempstead (Long Island), the Suffolk Cooperative Library System at Patchogue (Long Island), the Westchester Library System at Mount Vernon, Mid-Hudson Libraries at Poughkeepsie, Mid-York Library System at Utica, the State University of New York Library at Albany, the State University of New York Library at Potsdam, and as partial participants Columbia University Library and the State University of New York Library at Binghamton.

An **evaluation of the FACTS project** at the end of July will determine the course it is to follow in the future. If its experimental use has shown significant elements of success, the library station's operations may even be expanded to serve local libraries in neighboring towns and counties. The picture from the Cornell experience, comments Mrs. Caroline Spicer of the Olin Reference Department, looks promising. The direction may well be toward an expansion and strengthening of this electronic web, and a continuation of the effort to catch time!

Student Exchange —

South of the Border

by ALEXANDER HARWOOD '68

A new exchange student may be old hat at Cornell, particularly in view of all the foreign students here and all the Cornell students abroad, but exchange programs, especially in the College of Agriculture, have a significance which makes them anything but meaningless.

The College of Agriculture is expanding the opportunities for exchange students. By the end of this month, two freshmen will be chosen to go to Mexico and one to Argentina. According to Herbert L. Everett, director of resident instruction at the College of Agriculture, the program in Mexico may expand in the next few years to accommodate five or six students.

Following their sophomore year, one of the freshmen will go to the University of Buenos Aires and the others will attend the Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico.

The Cornell students will spend their vacations working on farms or at experiment stations, participating in organized field trips, and getting acquainted with the customs of the people.

The students will be expected to learn Spanish before they leave the United States and will be as well prepared for the transitions and adaptations necessitated by their new environment as possible. However, Director Everett surmised, "There will be cultural shock and the student will have to adapt, but this will make the trip more meaningful." But the significance of the program goes beyond its obvious rewards for the student.

There is a reason for the program — a reason which is humane, practical, and idealistic. These students, much like those before them, will be stimulated by the new and exciting world they will find and hopefully will continue their work abroad after college.

Everett said of this type of program, "You can get tremendous responses, and students often continue their careers in the area of agricultural development."

J. P. Hertel, secretary of the College of Agriculture, put it this way: "To live in a country which is in the process of development — one in which the agricultural practices run the gamut from the most primitive to the most modern — stimulates people toward a career in development, a field in which people are going to be sorely needed in the next 25 years."

The new program is slated to be supported by the College of Agriculture. According to Everett, the College was so impressed with the schools and the value of the program that it instituted the program without waiting for signs of outside support. However, Everett disclosed that the Ford Foundation in Mexico has encouraged the project and eventually may provide the funds which will enable five or six students to study south of the border.

The students selected will make their own arrangements for travel and will pay their own transportation costs. Other than transportation, the total cost of the year will be a little more than three thousand dollars. Each exchange student is expected to provide at least one thousand dollars. Scholarship assistance will provide the balance.

In the past, many Cornell students who studied abroad have gone on to work in developing nations. Hertel cited several Cornellians who have worked everywhere from Argentina to Viet Nam. Whether the students who go to Mexico and Argentina in years to come will pursue careers in agricultural development no one can say, but the worthiness of the project is beyond question.



A Rose is a Rose is •

Once upon a time the late Dean Liberty Hyde Bailey, of the New York State College of Agriculture at Cornell, offered a young scientist a position with the College if he would study sedums. Though not especially interested in sedums at the time, the scientist accepted. Now, thirty-one years later, Dr. Robert T. Clausen finds his studies of sedums both interesting and challenging.

What's a sedum? Well it's like a rose, only not quite, and it's like chickweed, only not quite. For Prof. Clausen

it's an individual taxonomic group of flowering plants, but for the average layman it's plants which are similar to many of our garden flowers. Homeowners and gardeners seek them out for their beauty; Prof. Clausen searches for them to study them.

A **sedum** is technically a flowering, succulent herb or sub-shrub, meaning that it has thick fleshy leaves and stems containing much water. Though they have similar properties, sedums are not related to the cactus. They may, however, be distant relatives of the rose. Three hundred and sixty species are known to exist in the world. Some are tiny, perhaps only a fraction of a centimeter high. Others may be shrubs, with a height of six feet. On tropical mountains, sedums several yards long may hang vinelike over a cliff.

Sedums are found only in the Northern Hemisphere from the Old World to Luzon, in the Philippines, in the higher mountains of Africa, and all over North and Central America. It is not known if any exist in South America. They have been introduced there, but whether they were there originally has yet to be proven conclusively.

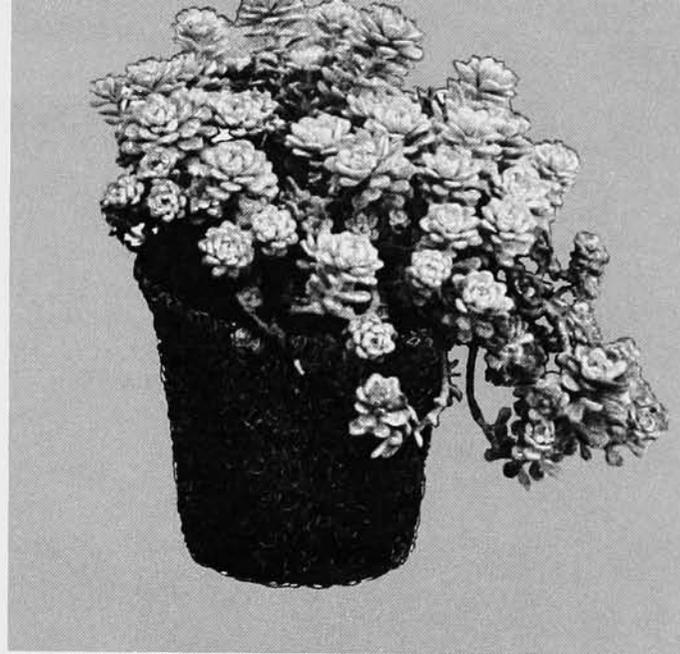
Dr. Clausen's original work involved publishing a book for laymen describing the various types of sedum and how to recognize them. There had been a great deal of confusion as to which scientific name stood for which plant. From this beginning his work has grown to include the theoretical aspects of sedum — where they grow and why, how they reproduce, how they evolved, their value — in short, the complete story of the family. Dr. Clausen is exploring the diversity of the plants in nature and the extent to which it is inherited. Some plants that look entirely different are actually the same species. They appear similar when grown under identical conditions of



SEDUM SPATHULIFOLIUM SSP. PRUINOSUM? — This sedum, grown from a small stem collected from bluffs by the Pacific Ocean in Bandon, Oreg., is one of 1,900 in Prof. Clausen's collection at the N.Y. State College of Agriculture, Cornell University. Collected from mountainous areas of the United States, Mexico, and Canada, the botanist grows them in greenhouse, cold frame, and outdoors to identify and classify them. This one is *Sedum spathulifolium* subspecies *pruinsum*.

Like a Sedum

by SUSAN JONES '70



soil, water and temperature. If, when this is tried, the plants remain different, the difference is due to genetics, not the environment.

In keeping with his project, Dr. Clausen has gathered one of the largest collections of live sedums in the world. It includes 1,908 plants from the United States, Canada and Mexico — 435 now growing outdoors, 588 in cold frames, and 885 in Cornell greenhouses. There is also a large group of dried specimens housed in the Wiegand Herbarium at Cornell.

The live sedums are used primarily for experimental purposes. Ten different experiments are in progress at present, concerning the effects of changes in such things as soil and the amount of water and light available. Some are conducted outdoors. Others need controlled chambers, especially if the specimens used come from warmer or colder climates. For example, a plant from Alaska needs an extremely long period of daylight in the summer, so it must be put in a special chamber which will provide the needed light. Most, though, will take abuse. One group of cuttings was left dry for six months, but when planted, they grew. They will grow in fairly poor soil. Dr. Clausen does not fertilize his plants, because he does not want to change the experimental conditions. He still has some of the original plants from his first project, begun in 1935.

New sedums can be grown from the stems of old plants, much as an African violet plant can be grown from a leaf, although the violet is not a sedum. Therefore, many plants that are genetically identical can be grown, each under different conditions. This makes sedums especially valuable for study.

A love of the outdoors and a bit of daring are needed on one of Dr. Clausen's collecting trips, which have taken

him everywhere from British Columbia to the ranch owned by Twentieth Century Fox Studios. In Mexico, the collectors were caught in a game of "cops and robbers" between two feuding families. As bullets whizzed around them, they still managed to reach the sedums they sought.

This past summer, Dr. Clausen covered the central Rocky Mountain states of Wyoming, Idaho and Montana. At Jackson Hole he found a rare hybrid that had previously gone unnoticed. In the Grand Tetons, during another expedition, he discovered a sedum bearing ten pistils. A normal sedum has only five. Searching for the reasons behind such abnormalities leaves little opportunity for boredom. There are always new problems and possibilities to be explored.

The trips are planned to coincide with the time when sedums are in bud and flower. The geographical location, the extent of the area and the number of plants observed are noted. Also, the exposure, soil type, drainage, acidity of the soil and other plants growing in the area are recorded. The floral parts are measured, pictures are taken, buds are collected for studies of their chromosomes and small pieces of the plants are taken to be grown back at the Cornell laboratories.

Plants are collected according to statistical rules. Each plant on a mountainside, for example, is given a number. Then, by drawing numbers randomly, each plant has an equal chance of being used in one of Dr. Clausen's experiments. Cuttings are taken which are of equal size. In experiments, the randomly chosen plants are laid out in a random fashion. From data collected during these experiments, Dr. Clausen hopes to produce an authoritative treatment of sedum for the world.

COUNTRYMAN CAPSULES

Thirty-two Cornell University students will spend this summer on a 5,500 mile trip through the South. The purpose of the mobile class, "Agronomy 461," is to give the students a first-hand acquaintance with food and fiber production in regions where conditions are different from the Northeast. The classroom will be on the move from August 13 through September 3 and will pass through some of the finest cotton, rice, tobacco, and citrus growing areas in the country. States to be visited include Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Tennessee, Kentucky and Ohio.

Last year, twenty-eight Cornellians were involved in a similar trip that took them through fifteen states in the West and Ontario, Canada. This summer, the students will head south with only sleeping bags, notebooks and a few essentials. They will stop to study soil profiles at open pits. A visit to the Tennessee Valley Authority is also included.

The class, led by Professor Ralph L. Obendorf, field crop physiologist at the College of Agriculture, gave the students a chance to study farming as it is done. Obendorf concluded that, "Everyone was very enthusiastic."



Professor Gwendolyn Newkirk, chairman of the Department of Home Economics at North Carolina College at Durham, was the guest speaker at the recent Honors Day luncheon of the New York State College of Home Economics, Cornell University. Professor Newkirk was a Fulbright scholar and served with UNICEF as a senior lecturer and home science consultant with the Cornell Project at the University of Ghana from 1964 through 1966. The title of her speech was "The Inquiring Mind and New Destinies."

The Honors Day program was sponsored by the Student-Faculty Committee of the College and the local Chapter of Omicron Nu, national home economic honorary. During the program, the Borden Award was presented to Marianne L. Wendel, class of 1967, as a top-ranking member of the senior class. Miss Sena Gottlieb, president of the local chapter of the honorary presented the Omicron Nu cup to Lorraine Mandel, freshman, and a plaque to June Schlecker, sophomore, for the highest academic averages in their classes.

The luncheon also honored students elected to Omicron Nu, students named to the Dean's List at the College, and undergraduate scholarship holders.



Charles E. Palm, dean of the N.Y. State College of Agriculture, was made an Honorary Empire State Farmer by the N.Y. Association of Future Farmers of America, in a ceremony at Cornell University recently. He was recognized for his service to farmers and to the agricultural industry.



After twenty-five years of research, Professor Henry M. Munger, a plant breeder in the New York State College of Agriculture at Cornell, has developed the first non-hybrid mosaic and scab resistant cucumbers available for fresh market. The double disease resistant varieties will contribute, Munger said, to a general expansion of the cucumber-growing industry.

Though seed is widely available for the first time this year, limited amounts have been available to seed companies who have used them as parents of hybrid varieties that also carry resistance to mosaic and scab. These hybrids generally mature earlier but their seeds are considerably more expensive.

Munger began his research in 1943 as the result of studies on resistant hybrids obtained from a cross between two Chinese varieties. This was an attempt to improve China's food supply and was one of Cornell's first efforts in international agriculture.

ALUMNI



Dr. Harold E. Gray

HAROLD E. GRAY, '48, Pleasantville, New York, has recently been named vice president of the Burnham Corporation, Irvington-on-Hudson, N.Y. For the past three years he has been sales manager of Lord & Burnham, a division of the company.

The Burnham Corporation designs and manufactures glass and plastic enclosed structures, heating equipment and boilers. Lord & Burnham is the oldest manufacturer of commercial and residential greenhouses in America.

Dr. Gray, who received a Ph.D. in agricultural engineering from Cornell University in 1948, was on the Cornell staff until 1958. He then became director of sales promotion and development at Lord & Burnham.

Dr. Gray has served as president of the National Manufacturers Association, and is a member of the American Society of Agricultural Engineers; the American Society of Heating, Refrigerating and Air Conditioning Engineers; and the New York State Flower Growers.

He is the author of *Farm Service Buildings and Greenhouse Construction and Heating*.

PETER TUKEY, '66, is now in a two year training program with Warner-Chilcott Laboratories, Morris Plains, N.J. He is writing pharmaceutical sales and promotional material, some of which has appeared in the Journal of the American Medical Association. Last month he visited the upper campus to speak to communication arts students about careers in advertising.

J. LEE LEONARD, '63, is now Pennsylvania House of Representatives Correspondent for United Press International in Harrisburg, Pennsylvania. He is living at 4070 Nancy Drive in Harrisburg.

DURWORD CARMAN, '48, Madison, New York, was awarded a life membership in American Vocational Association for being teacher of the 1966 Star Farmer of America. The presentation was made at the 1966 AVA Convention in Denver by

Hamilton Hicks, Jr., educational director of the d-Con Company, sponsor of the annual award.

Editor's Note: We print the following letter not because we are totally satisfied with the Countryman but because we on the staff are pleased and proud that our efforts to improve the magazine have not gone unnoticed. We are continually seeking to upgrade the publication and sincerely hope that it will continue to improve each month.

Editors Cornell Countryman:

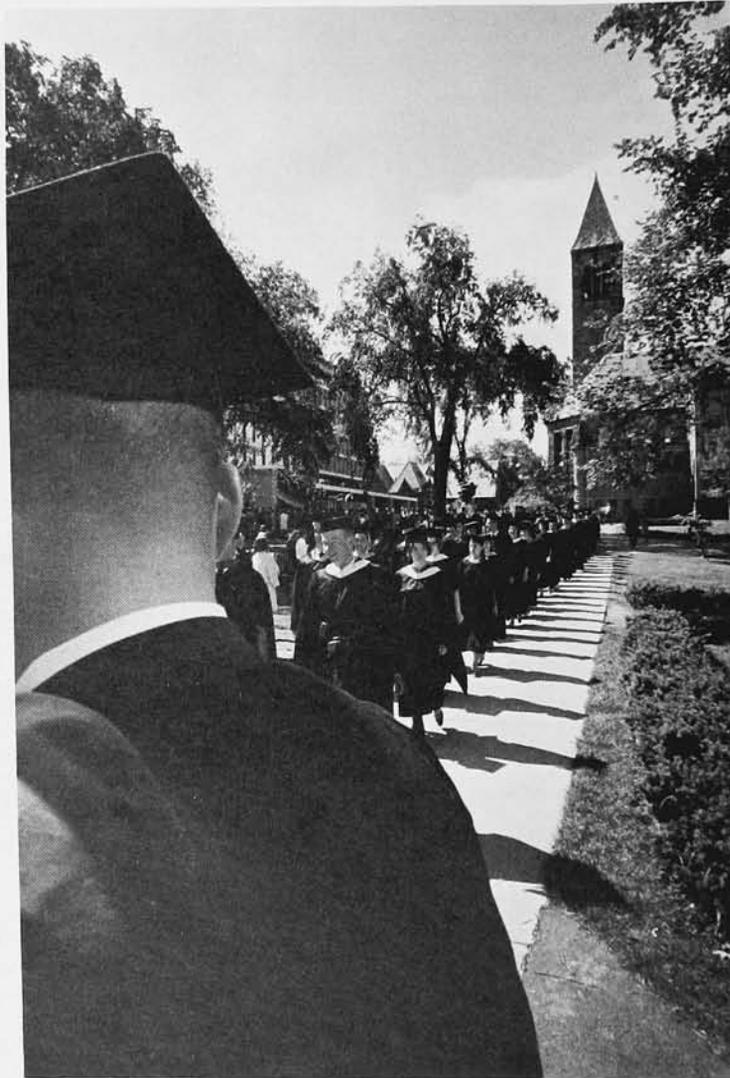
At the recent luncheon of the Alumni Association of the New York State College of Agriculture several of us were commenting on recent issues of the Cornell Countryman. It was the consensus that we like the "new look." Too often we write only when we're displeased or unhappy about something, so as an officer of the Alumni Association may I express my hearty approval of the magazine as it now stands.

S. M. Smith, '35
First Vice President,
Alumni Association
New York State College
of Agriculture at
Cornell University.



Ralph Winsor of Harpursville (left) is a newly elected vice president of Cornell's N.Y. State College of Agriculture's Alumni Association. Dean Charles E. Palm (second from right) posed with officers at their recent annual meeting at Cornell University. From left are: Winsor; Donald M. Bay, Macedon, second vice president; Steven M. Smith, Yorkshire, first vice president; Norman J. Smith, Vineland, N.J., president; Donald C. Whiteman, Adams, member of executive committee; Palm; and John F. Spencer, Ithaca, secretary. Not present: Stanley W. Warren, Ithaca, treasurer; Francis R. Sears, Cortland; and Robert H. Everitt, Schenectady, both members of the executive committee.

A SALUTE TO THE JUNE GRADUATES OF 1967



The New York State College of Agriculture at Cornell University takes pride in saluting the largest June graduating class in its history. Some 370 students will earn undergraduate degrees in 32 occupational categories as defined by the United States Department of Health, Education and Welfare.

Ellis Room

CORNELL COUNTRYMAN

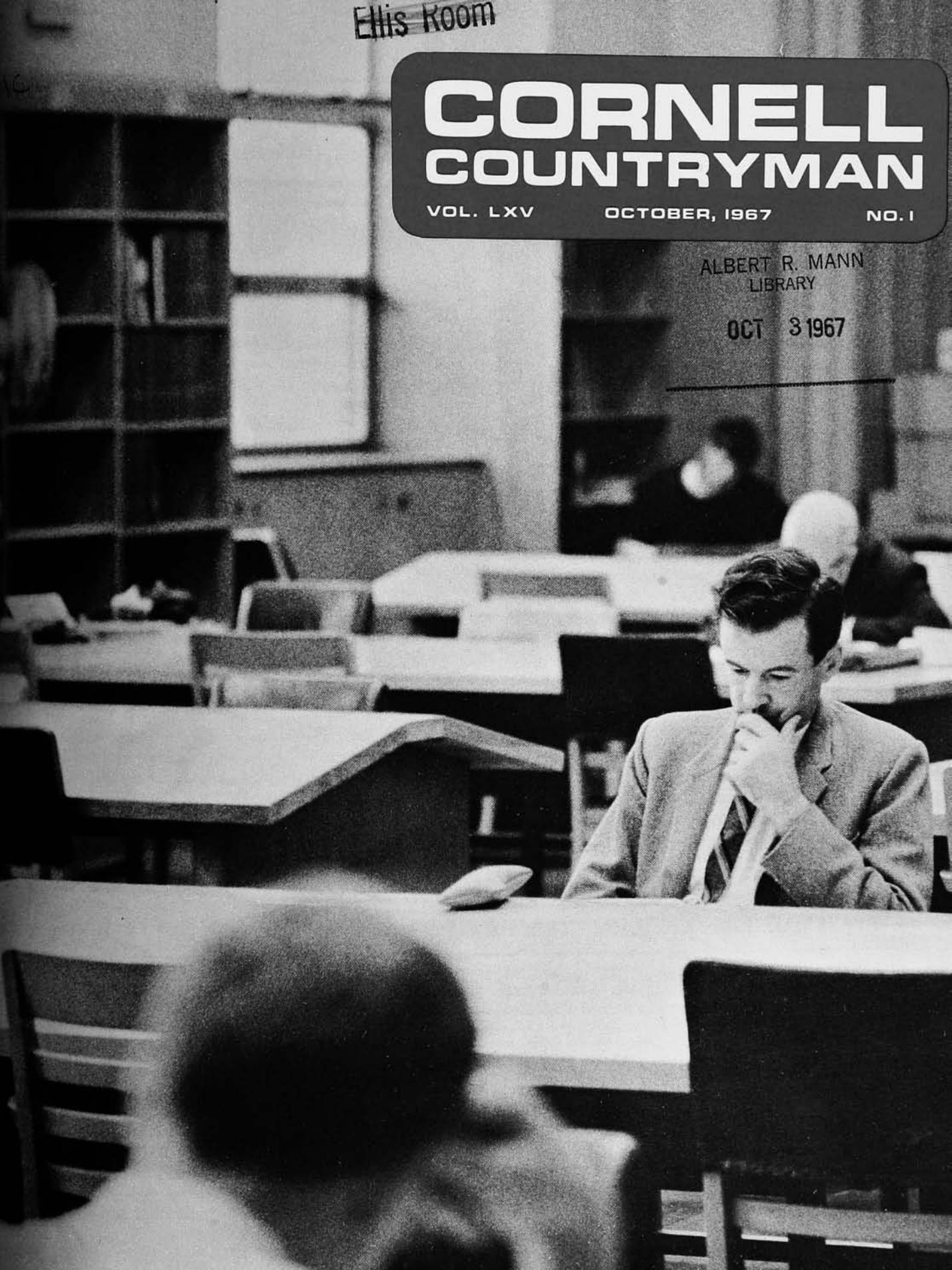
VOL. LXV

OCTOBER, 1967

NO. 1

ALBERT R. MANN
LIBRARY

OCT 3 1967



ON THE COVER

The solitude of study, the depth of thought within the reference room of Mann Library.

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CORNELL COUNTRYMAN

OCTOBER 1967 / VOL. LXV — NUMBER 1

EDITOR-IN-CHIEF: Jim Oliphant, '68; **MANAGING EDITOR:** Gregory Morris, '68

EDITORIAL STAFF — *seniors:* Bradley Berthold, Brooke Breslow, Mary Jane Ferguson, Robert Fistick, Peter Goll, Alexander Harwood, Richard Lorenzini, Richard Markham, James Montayne; *juniors:* Tamar Asedo, Michael Barclay, Harold Batty, Ellen Grossman, Michael Hogan, Anthony Ingraham, Joseph Kelley, Ira Lipsky, Gregory Pogson, Robert Potter, David Stewart, Sally Weisburg, Charles Wilson; *sophomores:* Jeff Altamari, Rodger Beck, Marya Dalrymple, Claire Garrett, Susan Jones, Nancy Kruse, Jerrold Trub; *freshmen:* Michael Barrett, Joseph Bulsys, Sally Clark, Michael Harris, John Henrehan Jr., James McRae, Jon Pennino, James Poggi, Calvin Smith, David Trost.

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Greece-Lebanon Brochures

by LORETTA CARL

Internationally, Greece and Lebanon claimed banner headlines in newspapers in past months. Political crises in both countries arrested world attention and a spotlight that still is flickering.

Before the banners, a rather pleasant tune was being played with a Greece-Lebanon air right on the Cornell campus.

The score? Four animal nutrition brochures for special seminars in Greece and Lebanon and a poultry fair in Greece.

Writing the texts was Cornell's role in the project planned by the United States Department of Agriculture. And from all indications it was another successful role played in the arena of international communications by the State College of Agriculture at Cornell.

Objective of the brochures was to offer the most up-to-date information on feeding cattle, swine, sheep and poultry. Good husbandry practices were to be emphasized.

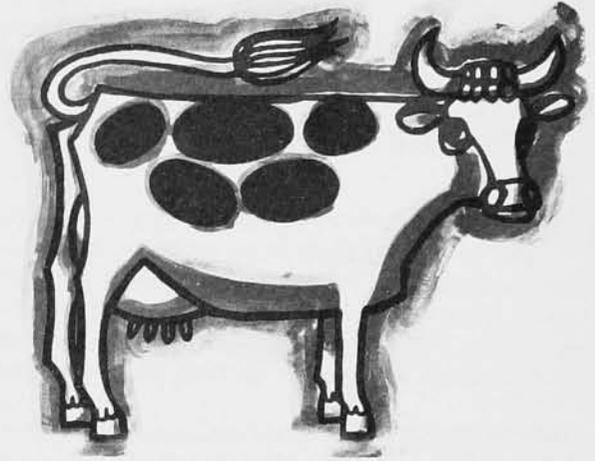
To meet the goal, time and talents of some of Cornell's top agricultural specialists were solicited and gratefully used. Persons such as Professors J. Thomas Reid, Robert J. Young, Douglas E. Hogue and Wilson G. Pond were among this writer's chief contacts who made the task of preparing the manuscripts a pleasant one. Their knowledge in specialized fields of animal and poultry nutrition, coupled with enthusiastic cooperation in sharing it, gave to the booklets an authoritative and accurate base.

Now, what was distinct about this assignment?

The four brochures were to feature modern aspects of nutrition using U.S. export ingredients; in particular, corn, grain sorghum, alfalfa meal (pellets where possible), soybean meal and animal fats.

According to J. K. McClarren, director, International Trade Fairs Division (USDA), the programs in Greece and Lebanon were to be part of a market development project. "Both of these countries are developing markets for U.S. feedstuffs, dairy breeding cattle and poultry breeding stock. Our agricultural attachés in these countries and the trade associations cooperating with the Foreign Agricultural Service, are in agreement that it is timely to undertake nutrition seminars."

The special problem at Cornell was to keep constant focus on the individual characteristics of Greece and



Lebanon. This, then, became the aim of everyone cooperating on the project at Cornell. It easily led to much library research and interviewing of persons who were from the two countries or had worked there.

Also, it was especially important to keep the reading audience in mind. In this case, the brochures were intended for government technicians, farm leaders and feed manufacturers at seminars and a poultry fair slated to be held last spring and summer. Any other audience was to be determined by USDA's Foreign Agricultural Service and its cooperators.

There were deadlines to be met, of course, and meetings in Washington to attend. There was much correspondence between Cornell and Washington as drafts of manuscripts were circulated for approval. Mostly, there was checking and re-checking of drafts for possible error.

There were ideas to submit for seminar exhibits — ideas based on the brochures — along with ideas for art work in the booklets. However, Cornell's chief commitment was to provide the English texts. Translations to Greek and Arabic as well as printing were to be handled abroad.

On schedule, the manuscripts were finished and forwarded to Washington. Months later, they were being read in Greek and Arabic.

In May, following the animal nutrition seminar at the University of Beirut, Lebanon, the International Trade Fair manager had this to say in a letter to Professor William B. Ward, head of Cornell's Department of Communication Arts:

"The brochures were a great success and the Director General of the Ministry of Agriculture showed special interest in them."

Again, a pleasant task. □

Editor's note: Loretta Carl, formerly of Ithaca and now of Philadelphia, Pa., was the person assigned by the Department of Communication Arts at Cornell to write the English texts of the Greece-Lebanon brochures.

Cornell Improves on the Old . . .

Thoroughly Modern Martha Van

by CAROL NICHOLSON '68

Martha Van Rensselaer is adding a new three and a half million dollar north wing to her house. When she moves in next February, some big changes will have been made in the grand old lady of home economics. Martha Van is going modern in everything from her new student lounges and closed circuit television to a revamped curriculum.

Both students and faculty will share in the benefits of the new red brick addition. Most classes will be held in the new wing, and the 35-year old original structure will be renovated to house department, faculty, and graduate student offices, as well as a few classrooms and laboratories.

New student and faculty lounge areas are features of the new wing. Student lounges will include discussion and informal study areas. Coffee will be available from a small kitchen adjoining the lounge, and food machines in the corridor will serve snacks. The faculty lounge will be only slightly different from the student lounge with a more subdued color scheme.

Another innovation in the north wing includes a closed-circuit television system designed for instructional telecasts to classrooms and other areas in the old and new Martha Van. Lectures and demonstrations will originate from the TV studios, laboratories, conference centers, and classrooms themselves. These will reach students via strategically placed monitors as live presentations or on a delayed basis through video tape and film.

A television camera will also be installed in the north wing's 121-seat lecture room. It will project onto a large screen demonstrations made in the front of the room, thereby increasing the visibility.

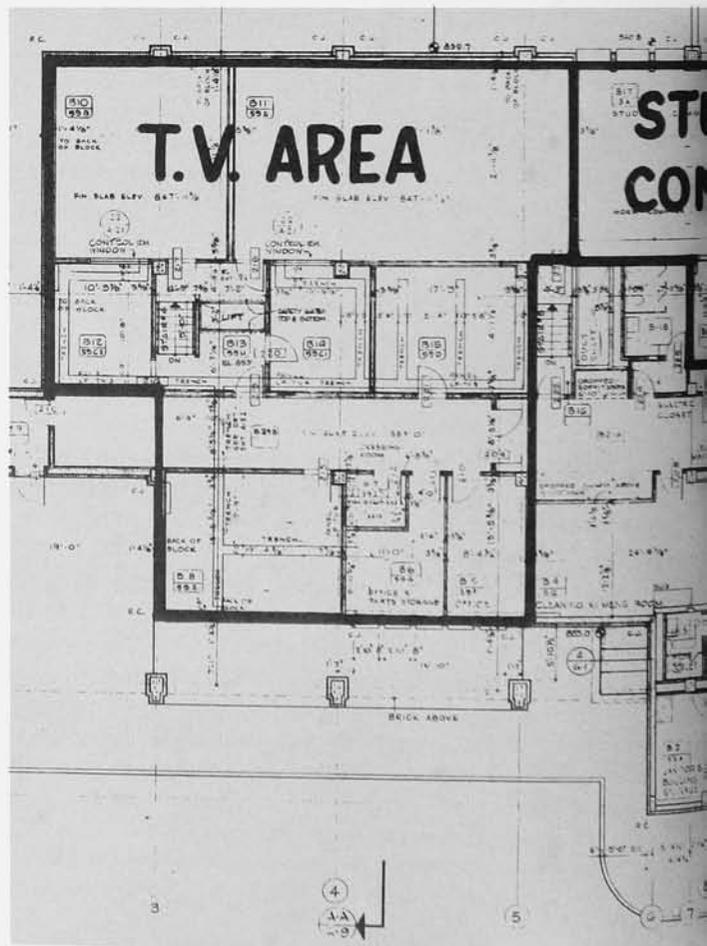
Other up-to-date features will be in the food and nutrition research laboratories. One of the labs will have special exhaust filters, waste disposal equipment, and storage facilities so food scientists can use radioactive materials in their research.

Many other departments will have special facilities in the north wing. The Child Development and Family Relations Department will have expanded research facilities including two small nurseries with observation booths and an art room with a kiln. The Education Resource Center will consist of a large demonstration room with an adjoining reading room and observation booth. The departments of Housing and Design and Household Economics Management will also be thoroughly expanded within the newly available space.

In addition, new and larger classrooms will allow increased numbers of undergraduate and graduate students to attend Cornell. Undergraduate enrollment will climb from 800 to 950 while the number of graduate students is expected to double — increasing from 150 to 300.

Accompanying this increase in the number of students, Miss Jean Failing of the Home Economics Counseling Service notes there will probably be more graduate and 400 level (senior level) courses offered in the future. In addition, honors work and special studies will be offered in departments where there is a student demand.

Cornell's campus is growing and Martha Van Rensselaer is not going to be left behind. With a new building and the latest equipment, the old lady will soon be a thoroughly modern Martha Van. □



... Expands with the New

Noyes Center — The Newest

by JEAN DONNELLY '67

Cornell students have a new student union — The Jansen and Agnes Noyes Center. It's located in the University Halls dormitory area and it's designed to serve the entire Cornell community.

What's at the Noyes Center for you? Do you want a place to relax? The Center has two large lounges — one with a color television. Do you want a place to study? The third floor of the building has study rooms with private carrels. Or you can type a paper in the typing room or listen to a record in the music room.

Perhaps you're hungry? The snack bar serves everything from pizza to charcoal-grilled hamburgers. The cafeteria serves breakfast, lunch, and dinner every day. Would you like to invite a professor and some friends to continue a discussion started in class? Then request

one of the seminar rooms on the third floor and have private, comfortable surroundings for your session.

Activities and programs for the Center will be planned by a Board of Managers. Members of the Board will represent student groups — dormitories, fraternities, and student government organizations — who plan to use the Center.

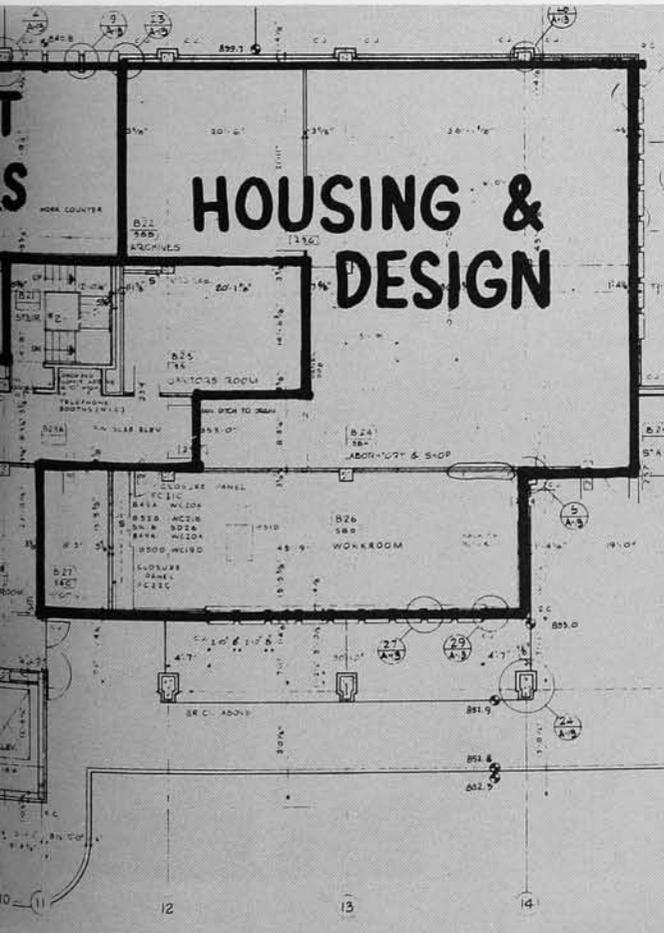
What are the possibilities for Noyes Center? Jeff Klopff '70, president of the Board of Managers, says there will be "unlimited possibilities — as extensive as the interests and imagination of the Cornell students." Klopff and the other Board members agree that the students who use the Center should be able to help plan the programs. Therefore, the Board has divided Noyes Center into "areas of consideration." A student with a program idea for a particular area can contact Klopff or another Board member in order to develop an activity.

Students have an array of possibilities from which they can plan activities. Social and recreational events include dances, billiard tournaments, and karate classes. The music room, art gallery, and lounges provide areas for exhibits, seminars, and student-faculty discussions. Members of the Board are also available to help arrange bus trips to New York City or provide campus services such as a book exchange.

J. Kent McCrimmon, program director of University Unions and manager of the Noyes Center, believes before a regularly scheduled activity program is instituted, students should have an opportunity to "try out" all equipment and facilities. Therefore, the Board of Managers has already conducted a three part Noyes Center open house to acquaint students and faculty with the union.

A walk-through tour of Noyes Center was the first part of the introductory program where dormitory counselors and officers of groups going to use the Center saw all the facilities — from the doughnut making machine to the electronic taping equipment. The second part of the program consisted of a Programming Open House for students rooming in the University Hall dormitories. Equipment ranging from billiard tables to stereo record players was demonstrated. Finally, the grand opening and dedication of Noyes Center was held with Mr. and Mrs. Jansen Noyes and family, President James A. Perkins, trustees, and members of the administration present.

Yes, a welcome addition to our campus, the Jansen and Agnes Noyes Center — a student union designed to serve the entire Cornell community — is here! □



Feed for the Fall

by JIM OLIPHANT '68

What am I going to feed my milkers this fall? This question is being asked by many New York dairymen since alfalfa, "queen" of the forages, has been in danger of being dethroned.

Of all hay roughage, alfalfa, when grown on the proper soil, is highest in nutritional (protein) content, highest in yield per acre; therefore, it's the right feed for high quality and quantity milk production.

This year, however, two things damaged alfalfa stands during the early cutting season (late May — early June): heavy rains washed valuable nutrients out of the already cut crop making it heavy in fiber and light in digestible nutritive content, and the evil alfalfa weevil emerged from its winter forest home.

From mid June to mid August, the adult weevil rampaged alfalfa fields, puncturing stalks, slitting leaves, and propagating larvae who added to the feast in almost every county of New York State (excluding only Lewis and St. Lawrence counties). In Tompkins County, 50 percent of all the alfalfa fields were damaged so badly that they will be incapable of providing nutritionally adequate feed this fall.

Now dairymen ask if they should feed heavy amounts of corn silage mixed with small amounts of alfalfa hay, since corn crops this past summer were plentiful, or blend other forms of roughage. To find the answers and keep milk production up, agricultural researchers, Extension agents and journalists begin to report.

Ernest Cole, head cooperative extension agent for Tompkins County, says: "More corn silage and less alfalfa hay should be fed. In the future, farmers should not give up on their quality alfalfa stands, as the crop can be spared if: (one) it's cut early, before the weevil gets to it; (two) farmers spray their fields with insecticides guaranteed to kill the weevil."

Professor C. A. Bratton, Department of Agricultural Economics comments: "Alfalfa cut back in July is low in nutritional quality. The dairyman must realize this; otherwise he'll feed only low quality roughage, getting in return low milk yields . . . Farmers hit by the weevil should alter their feeding programs this fall. They should feed higher quality alfalfa, second and third cuttings, in combination with plenty of nutritionally adequate corn silage."

Agricultural research is invaluable when it is interpreted for each farmer by the agricultural journalist. Gordon Conklin, editor of *American Agriculturist* and

The Rural New Yorker, one of the oldest farm business publications in the nation, published in an April issue of A.A.R.N.Y., "How To Beat The Evil Weevil." The article noted, in particular, the weevil's breeding and feeding habits (so dairymen could know the best time to cut and spray their fields), insecticides to use for weevil control, and alternative crops to use for roughage instead of alfalfa hay.

However, the April article didn't do the farmer much good. In late May, cold weather (Ithaca temperatures averaged 8 degrees below normal) kept yields down, delayed first cutting and left beginning crops to be feasted upon by the weevil. Also, heavy rains washed away insecticides. Editor Conklin, sensing this fall's feeding problems, therefore wrote his own article for the September issue of A.A.R.N.Y.

He emphasized: "Dairymen should face up to the true quality of (alfalfa) hay they will be feeding, and consider using the best quality they have in small amounts, plus corn silage and grain to complete nutrient needs." He also warned that infestation by the weevil will probably be much worse and probably much more widespread in the future, and gave recommendations concerning when to cut stands and which insecticides to use.

It's evident the alfalfa weevil has declared war on all healthy alfalfa stands, but it's for sure that agricultural researchers, Extension agents and journalists aren't going to let farmers lose the battle. They're passing along the information that will provide adequate "fall forage," keep farmers out of the red, and keep dairying on top of agribusiness in the Northeast. □

Nutritionally adequate feed will be fed this fall!



Aggies Name Their Courses . . .

Names and Supernames

by JENNIFER SOHN '68

At Cornell, certain groups express themselves differently; Architects wear torn pants and have long hair, Arts students wear no socks and appear with a six day beard, Home Eccies convey "homemanship" and "dress neatly." Aggies, on the other hand, aren't differentiated so much by appearance as by speech. They've developed an "in" language — one that has to do with super cows, farm manglement, beans and genes, and wines and vines.

What are the Aggies talking about? Are super cows better cows? A group of seniors laughed when they were asked this question, for super cows denotes an advanced dairy management course. Farm Manglement is Farm Management, Beans and Genes is a Vegetable Crops course, and Wines and Vines is Small Fruits.

The seniors chuckled further over the thought of someone writing down their "language." Clucks — Poultry Science, Chow for Cows — Animal Husbandry, Mini Bugs — Microbiology, Name Game — Conservation, Books for Crooks — Accounting are all very common to them.

"Everyone on the upper campus knows you're talking about advanced dairy management when you say Super Cows," explained John Hamilton, a senior. "Nobody means any harm — it's just humor."

Senior George Lott added: "One of the guys will just come out with these names in lab or a discussion section and it catches on. Not everyone uses the nicknames. Sometimes you'll hear an upperclassman playing 'cool' — throwing Tools for Fools or Barnyard Sex out to a freshman. But then again, some guys use them constantly."

Asked if he thought professors minded or knew about their vernacular, George answered: "I'm sure the professors know and don't mind at all. It's all in fun — just some way to make a hard course a little more bearable."

Tom Przysiecki, senior, added to the discussion. "The names are a combination of identifying and giving an opinion of a course. It's just plain humor . . . these names have been around for years and as the courses change, the names change."

Another in the group said Ag students ought to write their own catalogue. All agreed and started composing the '68-'69 Announcement or "The Freshman Directions." Here's what they came up with:

Agricultural Economics

- 150 Cows and Plows — Alternative farm policies — you do it your way and I'll do it mine.
- 221 Books for Crooks — A comprehensive survey of basic juggling principles in agricultural business.
- 302 Farm Manglement — A study of the organization — then downfall of a farm.
- 402 Super Farm Manglement — A study of the organization — then downfall of many farms.
- 314 Sadistics — An introduction to procedures and methods.
Prerequisite — aspirin supply.
- 326 Coops — Cooperatives: What they do, should do, and don't.
- 406 Walks and Talks — How to price farms, or, how to make money!

Agricultural Engineering

- 204 Boards and Nails — An introductory course acquainting the student with wood.
- 205 Arcs and Sparks — Burn it but don't let it burn you.

Agronomy

- 111 Chow for Cows — Livestock feeding.
- 200 Dirt — A comprehensive introduction to the dirt field.
- 312 Seeds and weeds — Crops: What should be but aren't.

Animal Science

- 220 Barnyard Sex — Livestock improvement.
- 420 Super Sex — Problems involved in the improvement.

Biological Sciences

- 240 Mini Bugs — Small pests.
- 281 Fruit Flies — A general study of fundamental genetics.
- 470 Fish — An introductory course acquainting the student with fish.
- 472 Birds — For those not interested in fish.

Entomology and Limnology

- 210 Bugs — An introduction to the study of why they drive you crazy.

Conservation

- 411 Name Game — An introduction to the mechanisms of wildlife populations. Prerequisite — ability to count.

Pomology

- 502 Wines and Vines — A study of the general principles and practices in fermentation of grapes. Particular attention is given to their significance in making people happy.

Vegetable Crops

- 222 Spuds — Topics include storage methods, grading, packaging, cooking quality, nutritive value, processing, industrial uses . . . of potatoes. □

The Country's City Children

by MARY JANE FERGUSON '68

The new model farm at Sharpe Reservation, Dutchess County, New York, has had over 5000 visitors in the past two summers. What's the big attraction? Cows, pigs, chickens, a vegetable garden. Not too much new to upstate New Yorkers, but a great deal new and exciting to 5000 New York City boys and girls who attended the Fresh Air Camps at the reservation in the last two years.

For the first time in their lives, these youngsters, from ten to fifteen, have had a chance to actually see the source of their food supplies. They discovered that milk isn't *always* in bottles, and anyone who wanted to, got a chance to draw milk from the cow herself. And eggs aren't always so neatly packed in cardboard dozen containers; one of the most excited shouts was, "Hurry up, there's an egg coming!" which brought youngsters crowding around the hens to watch and then to pass the egg around — still warm from the hen.

The Fresh Air Camps and the model farm are all located at the Sharpe Reservation near Fishkill, New York. Three of the seven camps are for girls eleven to fifteen years old. Two are for boys eleven and twelve years old, and one camp for boys thirteen and fourteen. Hidden Valley Camp is for boys and girls eight to twelve years

Counselor Marc Olshan explains the how's and why's of garden growth to the campers.



old and provides summer fun for handicapped and non-handicapped children.

Each camp operates on the basic Fresh Air Fund philosophy, "to provide children with a pleasant, worthwhile experience." The camps are entirely supported by private contributions and the children stay for two weeks, except for Hidden Valley Camp where the stay is three weeks.

Activities range from fishing to arts and crafts, and the campers are allowed a wide range of choice. Counselors are mostly college students representing several foreign countries as well as the United States.

Every child at the Fresh Air Camp has an opportunity to visit the model farm at least once during the first week of stay. Then, anyone who expresses an interest can return for more activities at the farm.

For those returning to the farm, special interest groups are formed to increase the children's involvement with farm life. Some groups follow the development of a chick . . . when it's laid as an egg, hatched in the farm's incubators, bred in a special box designed for observation, and grown in the farm's modern cages and pens. Some groups clear land, plant seeds, and weed as their garden begins.

To keep all this summer spirit alive, counselors make a special effort to have each child take home a plant to watch and care for, something tangible to continue their involvement with the world they found at the camp.

All of the funds for the activities of the model farm come from New York Farmers, Incorporated. This group of New York City businessmen was founded simply "to promote agriculture," and today a significant amount of their work deals with providing college scholarships to students studying agriculture.

Several members of N.Y.F., Inc. serve on the director's board of the Fresh Air Camps, and have formed a committee to run the model camp on a five year trial basis.

Through the cooperative extension division of the College of Agriculture, they succeeded in enlisting the aid of six agricultural professors at Cornell to serve as advisors to the project. Professor E. Eaton, Department of Agricultural Engineering, chaired the group of professors representing departments of animal science, poultry, floriculture, and vegetable crops.



Here Olshan acquaints the campers with one of the most popular farm animals . . . the RAM.

Prof. Eaton also helped plan the major structure on the two-acre model farm — the pole barn. As its name implies, the barn is supported by poles, walled over on three sides but open on the fourth side to a small paddock where animals are kept. With this arrangement, the campers can lead a cow (for example) from the pasture into the barn, then take turns milking her.

Within the barn and pastures are animals on loan from neighboring farms. Animals included are cows, chickens, pigs, and sheep.

In the flower and vegetable gardens are grown plants recommended by Cornell specialists. Requirements for model farm plants were fast growing, hearty plants which produce rapid, sure results for the two-week campers.

The six Cornell professors also screened and chose the counselors for the model farm. They wanted interested, able young men, preferably with a year of technical experience on farms or in an agricultural school. They had to be familiar enough with the farm procedures not only to perform them smoothly but also to explain the "what's" and "why's" of the farm to inquiring youngsters.

The counselors chosen, William E. Davidson of Sherborne, Robert J. Foster of Ithaca, and Marc A. Olshan of Irondequoit, also underwent an orientation session designed to help them understand the group of children they would be working with. These counselors had to be ready for surprise questions and puzzled looks, for the campers, referred to the Fresh Air Camp by 85 social agencies and thirty hospitals in New York City, had previously had little contact with any aspect of country life.

The campers weren't the only ones in unfamiliar grounds. For the counselor, it was quite an experience being asked by a small boy if a ram isn't *really* a goat. Because after a truthful reply, the boy would ask every

adult in the area the same question! He knew a goat had horns, the ram had horns, hence . . . he wasn't trusting anyone.

Another surprise for the model farm counselors was the uselessness of most of the charts and lectures they had prepared in order to teach each camper about the various life processes of plants and animals on the farm. The counselors found, to their amazement, that the campers already knew (from reading texts) about chicken embryos and eggs hatching, and they weren't going to be lectured about either.

What the campers needed and wanted was a new world of experience to see, touch, and work with. This was evident when a group of campers entered the barn area. The youngsters snatched the chicks from their pens, not relinquishing their new friends until the end of their visit. (The chicks seemed a bit confused but weathered the treatment well.)

The model farm has enjoyed much success. In the words of one 1966 camper, Douglas McTootle, "I wish I could stay all the time." Although he can't, Doug can keep with him a new and broader understanding of agriculture, and this understanding is what the farmers sought when they presented the idea to the Fresh Air Camps.

Although not in the original plans, the model farm is also visited by neighboring day-camps when their visits do not interfere with the Fresh Air Camps' schedule.

Popular with campers both inside and outside of the Fresh Air Camps, the model farm at Sharpe Reservation seems here to stay, giving city children a chance to breathe country air. Bill Davidson, chief farm counselor, called the model farm "a wonderful experience for the campers," and the city child is sure to agree even if he still believes that the Shetland Pony was only a big dog! □

City children get a chance to do it on their own . . . they milk a cow.





Are Grades Necessary?

by DIANE CHARSKÉ '68

Grades are nothing but numbers or letters recorded on a piece of paper. Yet they are the source of considerable tension, worry, and frustration for every student.

Should grades be abolished? I don't think so! Grades serve as a vital part of our educational system and cannot be completely eliminated. Yet, at the same time, they stifle the achievement of the most important goals of education.

The answer to this dilemma lies in the emergence of satisfactory-unsatisfactory grading systems — awarding students S or U instead of A, B, C, etc. — by colleges throughout the United States. After personally conducting a survey of fifteen colleges in New York, Pennsylvania, New Jersey, and Ohio, I found the widespread acceptance of this new trend in grading demonstrated. Although limited, the survey has good distribution. It includes the Ivy League schools and an equal number of large state universities and small private colleges.

Questionnaires were sent to the registrars of the various schools. Of the fifteen which returned the questionnaires, eight colleges indicated they either adopted an S-U grading system or such a plan would be in effect at their institution this fall.

Three colleges stated that they were presently considering the system. Only four of the fifteen said they did not have an S-U option and would not consider it within the near future.

Of the Ivy League schools, all have an optional S-U grading plan with the exception of Princeton and Yale, which are presently considering the idea.

At Cornell this new grading plan has been adopted by all undergraduate colleges within the university with the exception of the School of Hotel Administration. The College of Arts and Sciences first adopted the plan in fall of 1965. Most of the other colleges began the new program this past fall, including the College of Agriculture. Engineers were not offered the option until February, 1967.

The College of Agriculture places the following limitations on the usage of the S-U option. A student must have 100 credit hours with either A, B, C, or D grades including 45 hours distributed in physical science, biological science, social science and humanities. A department may approve S-U grading in specific courses if approved by the Committee on Educational Policy. Once the student has selected the S-U option in a course, the decision is irrevocable.

Similar regulations govern the system in the other colleges of Cornell. Generally the S-U option is open only to upperclassmen who elect to receive a grade of satis-

STUDENT NAME															COLLEGE & DEPT.																					
COURSE AND GRADE																																				
USE ELECTROGRAPHIC PENCIL ONLY. DRAW A DEFINITE LINE																																				
OVAL. IF THERE IS ANY DISCREPANCY OF INFORMATION, OR																																				
EXPLAIN BELOW, MARK THE PROPER GRADE AND ALSO MARK																																				
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37

Have Broom Will Travel

by ROBERT E. MILLER '68

The Cornell polo barns have been the site of many amazing feats of horsemanship. Sleek polo ponies and their riders, watched by crowds of dedicated polo fans, have thundered through countless periods of play or chukkers. But it's when the chukker is over that the *real* action begins!

As an amused crowd watches, six daring broomstick polo players march onto the polo field. Each has his own costume, consisting of tattered jeans, an iridescent orange or fire engine red shirt, a squashed fedora or a battered stetson, and a pair of old cowboy boots.

The player — unskilled in any field of horsemanship — is followed by his mount, either a retired polo pony or an old nag. As one novice rider remarked, "Either way, you can't win. If the horse is old and tired it won't move, and if the horse runs — you'll just fall off."

Just to make sure no one is seriously injured, the floor of the polo barn is covered with a soft turf. However, some of the players find it necessary to fortify themselves before going into combat. As one broomsticker notes, "You've got to relax so most of your falls won't hurt."

Each horse is only equipped with a bridle. No sissy stuff like saddles, for broomstickers ride bareback. Experienced riders might find this easy, but as one player remarked, "Horseback riding is a first for me." Horses aren't easily fooled and when his old mare sensed he wasn't in control of the situation, she turned into a bucking bronco.

Each broomsticker has his own brand of mounting as it's a long way to the back of a horse with no stirrups or saddle to help you climb up. The most popular mount is a running dive over the horse's back. If the rider runs too fast, he slides right on over the horse, which the crowd finds hilarious. However, most riders eventually learn to gauge their speed so they land draped over the horse's back. Then they wiggle into an upright position.

After the riders are mounted, the game is ready to begin. There are three players on a team, each equipped with a broom, bridle, and horse. (And the soft earth to fall on!) The object of the game is to hit a volleyball to the end of the polo barn and into your goal, which is painted on the wall.

Action starts when the ball is thrown into the middle of a collection of horses, brooms, and riders. The closest player will often take a mighty sweep at the ball, lean too far, and flop to the ground. As the crowd chuckles, he chases his horse, while the remaining players sit, kick their horses, and wave their brooms in the air.

Occasionally, some of the players are able to get their horses to canter, but they soon discover riding bareback is not easy. It takes a pretty good rider to swing a broom from a moving horse. Needless to say, more of a broomsticker's time is spent on the ground than in moving the ball toward the goal.

In a polo game, there are four chukkers with three rest periods in which the broomstick teams play. Two teams play in each of the first two periods — the winners facing each other in the third rest period.

Win or lose, the broomstick polo matches are fun for all. So, next time you see a poster advertising a Cornell polo match, come on up to the polo barns. You can watch the varsity play while you're waiting for the *real* action to begin! □

One broomsticker about to see the action from the floor... not on his horse!



Hunting is Happiness

by NICHOLAS N. SABETTO '67

It's that time of year again. Leaves are turning color, mini-skirts are disappearing until next spring, the first round of prelims is approaching and those of you who enjoy hunting are getting itchy feet. You are oiling shotguns, buying licenses and daydreaming in lectures until opening day.

As a Cornell student you are surrounded by some of the finest hunting grounds in the East. Regardless of the type of hunting you prefer, you only have to drive a few miles from campus to find happiness. Deer, upland game and waterfowl are plentiful in nearby areas of Tompkins County.

Last fall one Cornellian got his deer, an eight point, 190 pound buck within two miles of campus. Several hunters scored closer to home than that!

The Southern Tier section of New York State has the best-fed deer herd in the State. Here, in areas like Tompkins County, there is a healthy ratio of cropland to woodland. There is plenty of feed and the herd does not go hungry even in deep winter when Adirondack and Catskill deer often starve. Southern Tier deer *grow big!*

Because the area is somewhat populated and not really mountainous, rifles are illegal for deer hunting. Shotguns, with rifled slugs, must be used. With a little practice and a makeshift rear sight this is no handicap to a good hunter. Proof is seen in the number of cars around town about Thanksgiving with deer on their fenders.

Deer season opens locally on the Monday before Thanksgiving. It ends about three weeks later. If you are a real gung-ho deer hunter you can drive to the Adirondacks where the season opens about one month earlier.

Bear and wild turkey are the only other species of big game found in New York State. There are few of either of these species in Tompkins County and it is illegal to hunt them here. Turkeys are legal game in several counties, the closest being Chemung, to our southwest. Bear are usually taken incidentally by deer hunters. Each year several hundred are shot, most of them in the Adirondacks.

All the common species of Eastern upland game frequent the local area. You can enjoy your sport with rifle or shotgun, in woods or open fields. The season on woodland game, ruffed grouse and squirrels, opens early in October. A few weeks later, after crops are harvested, field game — pheasant and cottontail rabbit — become legal targets.



Pheasants are the species most sought after by Cornell's hunters. Opening day usually falls on a Monday but devoted hunters have been known to cut a few classes for a chance at a pheasant. Only the brightly colored male is legal in Tompkins County. Local birds include stocked and naturally raised individuals.

The grouse or partridge is another popular target. He is harder to hit than the pheasant because he zig-zags around trees rather than flying in a straight line. If you are alert, you will get a quick shot at him. He doesn't run out of sight on the ground like pheasants often do.

Rabbits are often taken as by-products of a grouse or pheasant hunt. They are usually found along edges, where fields border woodlands.

Squirrels make exciting sport for the rifleman who has patience. Once you locate a woodlot with several squirrel dens all you have to do is sit quietly and wait. Squirrel hunters must be good riflemen as well as patient hunters. It takes accuracy to make a head shot with a .22-rifle at a distance of 50 feet or more.

Cayuga Lake and local corn fields lure many migrating waterfowl into "stopping over" for several weeks on their way south. Canada geese and several species of ducks are fairly common during open season. Mallard and wood duck nest locally and add to the sport. Waterfowl hunting is regulated by the federal government so a Duck Stamp is necessary in addition to a hunting license.

Surprisingly, some of the best waterfowl shooting is over small ponds or streams. One Cornellian got a 12-pound Canada goose near a pond less than 50 yards wide on a rainy morning last fall.

Unfortunately, for most students living in dorms, apartments or fraternities, it is not possible to keep a trained hunting dog. (The dogs we see on campus and in lecture **do not qualify!**) A good dog, however, makes hunting more exciting and productive as it's difficult to find, flush and retrieve game alone.

The rewards of hunting are in the heart of the hunter. Most of the joy comes from being outdoors and feeling that you are a part of nature. Hunting is a good excuse to get away from the problems and pressures of daily life and studies. The Cornellian who enjoys this sport couldn't have picked a better place to go to school. □

Moo . . . NO MORE

by JIM OLIPHANT '68

"Okay son, drink your vegetable oil." This is one of the many themes used by producers of a product that threatens to revolutionize the dairy industry.

Imitation milk, a product made from nonfat dry milk, water, vegetable oil, an emulsifying agent and a stabilizer has arrived!

Many western markets have already been favorably tested with imitation milk. *Hoard's Dairyman*, July issue, reports that in California, five brands have been introduced: "Farmer's Daughter," "Clover Meadow," "Imperial Sno-Flo," "Milkonut," and "Moo." In Arizona, "Hi Protein Drink," "Family Drink," "MilKay" have appeared on cartons of the synthetic fluid that now supplies three percent of the total milk market.

Here's what some folks are saying concerning the introduction of this "milk-like" beverage.

Robert G. Fowler, associate editor of the *Farm Journal*, reported in the October, 1966, issue that, "The market people inform me that filled milk (milk where the butterfat is replaced with vegetable oil) is a real threat to milk."

Wilson H. Haverfield, administrator for the Central Arizona Federal Milk Marketing Area, reports that during each month of 1967, through June, imitation milk beverages gained in total Class 1 sales within Arizona (percent of total Class 1 sales represented by imitation products: January 1967—2.0 percent . . . June 1967—3.1 percent).

The American Dairy Association's weekly bulletin (June 21) reported, "Some of the current discussion which tends to downgrade the threat of imitation milk sounds familiar to those who were around 25 years ago . . . believing that the greasy, messy oleomargarine would never garner much of the butter business. Few people apparently have noticed the rapid replacement of cream products by non-dairy substitutes."

Northeast milk markets have not yet handled imitation milk (as of August, 1967). But Gordon Conklin, editor of the *American Agriculturist* and *The Rural New Yorker*, reported in the September issue of A.A.R.N.Y., that Mullers Dairy in Utica, New York, has obtained a franchise to sell imitation milk. Editor Conklin also reported that Herbert Kling, Director of the Division of Milk Control for New York State, has received inquiries from several out-of-state companies concerning labeling requirements for dairy substitutes.

It's obvious that the cow . . . the old producer of what many call "the perfect food," is being challenged for supremacy in the milk producing field. And the

economics of the situation hint she may not remain on top.

For example, ingredient costs for imitation milk (26.06 cents per gallon) can be favorably compared with the Class 1 price paid by milk distributors for raw milk which is 52 cents per gallon, about twice the ingredient cost for the imitation mixture. In addition, the consumer can purchase a new beverage at substantial savings. In areas of California, prices averaged 39 cents per half gallon, 10 cents less than real milk.

A possible conclusion, after reviewing the facts, is that the dairy cow . . . and many other aspects of the dairy industry today . . . will become obsolete. If this is true, Earl Welch, associate editor of the *Dairyman's League News*, says "The whole situation is very frightening."

In New York State, dairy products make up over half the total dollar value of all agricultural products sold. But in 25 years it's predicted (by an authoritative source who prefers to remain anonymous) that dairy cows will no longer be used for milk, and whatever is left of today's milk producers will be turned into hamburger or other lower-grade meat, since there will probably be a demand for cheaper livestock.

Though the dairy industry stands on the precipice of revolutionary change, there is realistic talk about meeting the competition.

Dr. G. C. Quackenbush, the American Dairy Association's director of market research, comments, "It will cost money to meet the imitation milk threat . . . Development of better communications — advertising and merchandising, etc. — must take place . . . There is going to be needed a much more unified feeling in the dairy industry."

Fortunately, dairymen and the dairy industry will have time to absorb change. Imitation milk hasn't as yet flooded milk markets, nor is it expected to dominate sales of milk when it does. There are still problems — off-flavor tastes, poor keeping quality, etc. — that will require continued research by manufacturers.

Also, there are numerous legal tieups as producers are finding it difficult to meet requirements set by various state laws for the sale of imitation milk.

However, it's evident that a new synthetic "milk-like" beverage will be introduced into the dairy industry. And from down to earth facts, it appears the scent of dramatic change is in the air. □

Gordon Conklin, editor of the *American Agriculturist* and *The Rural New Yorker* states that even with the advent of imitation milk, "Elsie" is still going to give the test tube a good fight in the production of a low cost, protein base (such as non-fat dry milk) to be used in the production of imitation milk.

Donald D. Ritchey, M.S. in agronomy, Las Vegas, Nevada, recently left for Algeria on a two-year appointment with the American Friends Service Committee. In Algeria, Mr. Ritchey will be part of an AFSC team which is carrying on an extensive program of community development in the area around Skikda. The AFSC, with world wide programs of relief and reconciliation, began its work with Algerians in 1959 when it sent teams to both Morocco and Tunisia to encourage self-help programs among Algerian refugees who had fled the violence of the Algerian war. At the termination of hostilities the AFSC moved into Algeria with the returning refugees and established programs of community development. The aim of the AFSC Algeria Program is to encourage self-help and self-reliance among the newly independent people of Algeria as they struggle to make their economy viable.



Dale Ritchey

Gerald P. Linser, '58, has recently been appointed director of grocery operations for the Peter J. Schmitt Co. The Schmitt Co. is the sponsor and distribution center for Bells IGA stores in Western New York. Mr. and Mrs. Linser, former Eileen Funchion, Home Economics '58, reside at 25 Brompton Road, Buffalo, New York.

ALUMNI

Editor's note: We print the following letter in hopes that others will be prompted to write and comment on material appearing in the *Cornell Countryman* each month.

Alexander Harwood '68, Editor
Cornell Countryman (May issue '67)

Dear Mr. Harwood:

I have read with interest your coverage of Secretary of Agriculture Orville L. Freeman's visit to Cornell in your May 1967 issue.

I have followed the Secretary's comments and statements with interest for a number of years, and I note that in his latest interview with your reporter that he is following his own advice of "slip, slide and duck" on the problems of agriculture.

In your interview, the Secretary is quoted as saying that the goals of the farm program are "not aimed at the little farmer." He also said, "They're not relief programs, but commercial farm programs, and were never designed to be anything else."

I find that the Secretary's attitudes have changed with his audience. In 1961 when I attempted to point out the absurdity of his farm program by purchasing a Cadillac with funds which were available through the Feed Grain Program, (I got \$6,700 for not planting corn), he defended the Program in a letter to the New York Times dated July 16, 1961. In his letter the Secretary indicated that the programs were not designed to assist commercial farmers of my type but "was designed to aid millions of farmers with net incomes of less than \$1,000 per year."

It appears that in his discussions of his farm policy, the only thing that Orville Freeman has remained consistent in is his policy of "slip, slide and duck."

Sincerely,
William T. Smith
State Senator
Class of 1938

Phillips W. Foster, '53, editor of the *Cornell Countryman* 1952/53, is presently a professor of agricultural economics at the University of Maryland. Dr. Foster is on sabbatical leave during 1967-68 as a Fulbright scholar in India. Dr. Foster received his Ph.D. in agricultural economics from the University of Illinois in 1958.

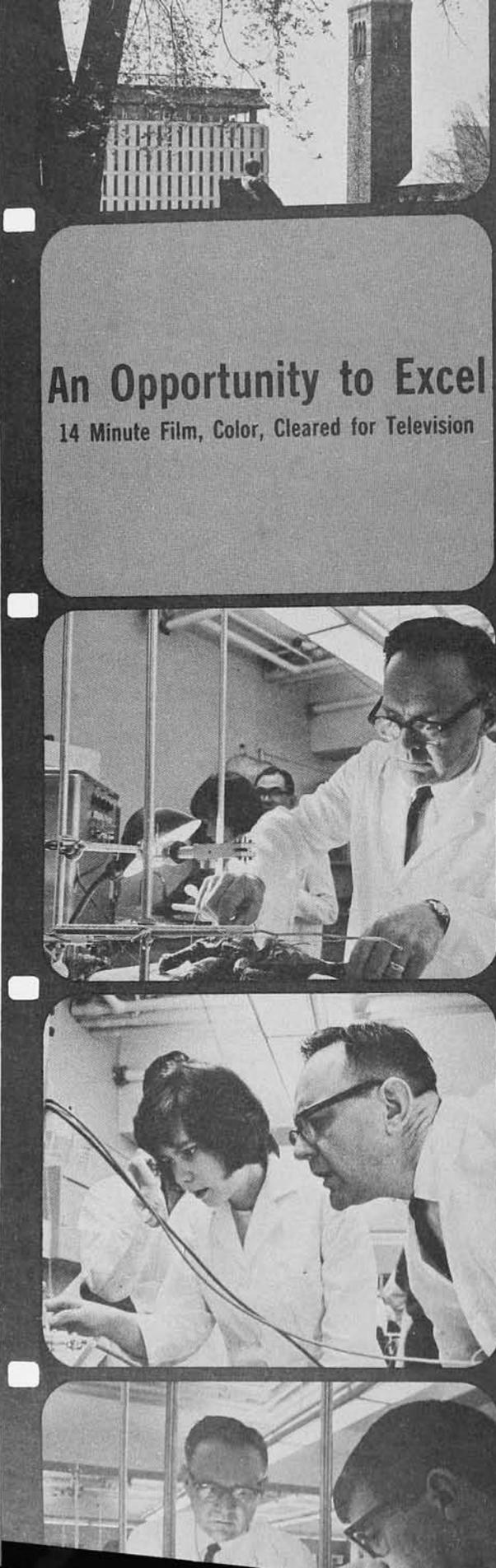
■ ■ ■
Michael V. E. Rulison, '53, editor of the *Cornell Countryman* 1951/52, is presently an economist with Research Triangle Institute, Durham, North Carolina. Dr. Rulison received his Ph.D. in agricultural economics from the University of California at Berkeley in 1966.

■ ■ ■
Dana G. Dalrymple, '54, M.S. '56, editor of the *Cornell Countryman* 1953/54, is presently a staff economist of the Office of Administrator, International Agricultural Development Service, U.S. Department of Agriculture, Washington. Dr. Dalrymple received his Ph.D. in agricultural economics from Michigan State University in 1962.

■ ■ ■
Arthur J. Dommen, '55, managing editor of the *Cornell Countryman* 1953/54, 1954/55, is presently manager of the New Delhi Bureau of the Los Angeles Times. Mr. Rommen was former UPI correspondent in Southeast Asia; Press Fellow, Council on Foreign Relations; and author of *Conflict in Laos: The Politics of Neutralization*, Praeger, 1964.

PICTURE CREDITS

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In a film such as AN OPPORTUNITY TO EXCEL it is only possible to provide highlights of the sights and sounds encompassed by the academic program of the New York State College of Agriculture at Cornell University. However, specific questions are welcomed. So for information about admission, degree possibilities, and courses regarding the physical, biological, social, and agricultural sciences, write to:

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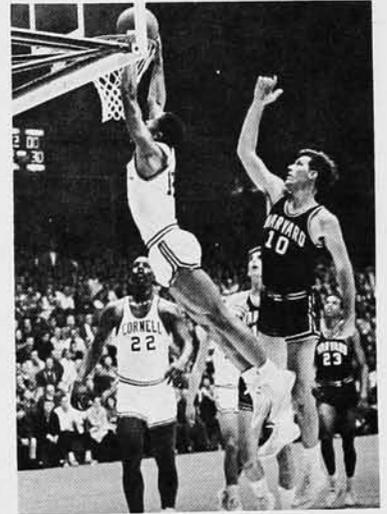
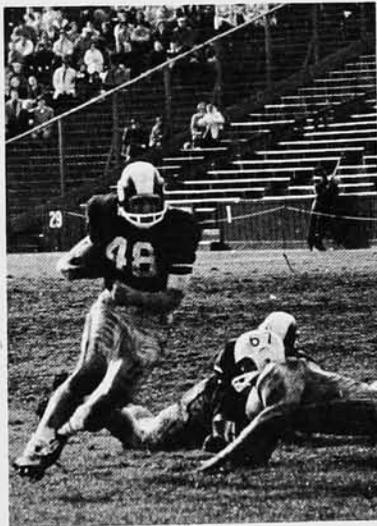
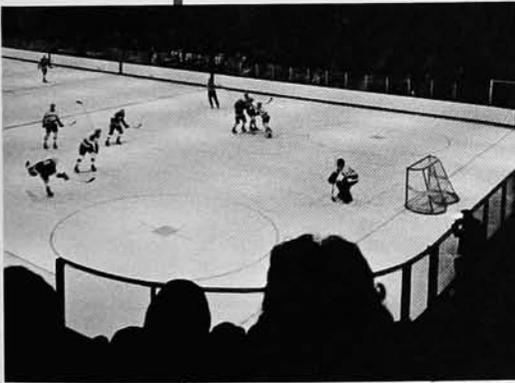
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CORNELL COUNTRYMAN

VOL. LXV

NOVEMBER, 1967

NO. 2



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November means sports. Football is on everyone's mind. The basketball and hockey teams have begun training for their coming seasons.

CORNELL COUNTRYMAN

NOVEMBER 1967 / VOL. LXV — NUMBER 2

EDITOR-IN-CHIEF: Gregory Morris, '68; **MANAGING EDITOR:** Bradley Berthold, '68

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THE COUNTRY'S LARGEST CIRCULAR ELECTRON ACCELERATOR

by JOSEPH KELLY '69



A section of the tunnel with synchrotron on the left. The pipe is encased in the shiny metal box on the top of the I-Beam.

To hurl an atomic particle faster than the speed of light requires a tremendous amount of energy. Devices capable of creating and sustaining such speeds are called betatrons, cyclotrons, and synchrotrons. These accelerators are pure research instruments used to probe and explore atomic particles.

Under Alumni Fields there is a tunnel one-half of a mile in circumference representing the largest circular synchrotron in the country.

The first ideas for the circular accelerator started back in 1959 under the direction of Dr. Robert N. Wilson, who was then with the Department of Nuclear Studies. The project is now under the direction of Dr. Boyce Daniel. Dr. Wilson is now with the National Acceleration Laboratory in Weston, Illinois.

On March 27, 1965, Cornell signed a contract with the National Science Foundation, which agreed to contribute \$11,298,000 for the laboratory building and synchrotron. Dr. Donald Edwards, an associate professor in the Physics Department, was very active in the designing and administration of the synchrotron. He took me on a tour of the site and explained how the electron stream, which passes through the pipe, is kept in its path. A series of 192 metal "magnet boxes" surround the pipe along its circumference. The one-ton boxes are ten feet in length and were built at Cornell specifically for this machine; it took two years to complete them. Their arrangement in the tunnel must be accurate to one-ten-

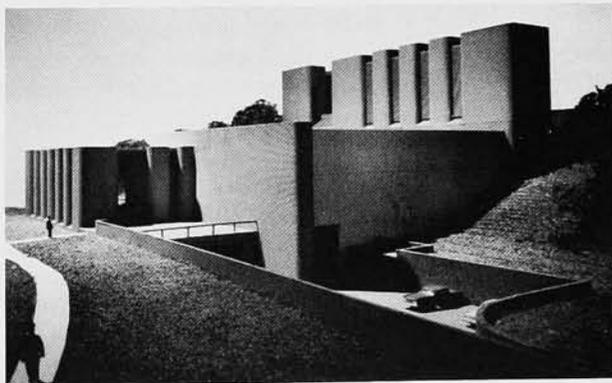
thousandth of an inch. The boxes do not feed energy into the electrons, but merely guide them. The energy is imparted by four "energy jolters" that are symmetrically arranged along the pipe's circumference. In the near future, it is hoped that the machine will operate at its maximum; ten billion electron volts (10 BEV).

In explaining how much energy this is, Dr. Edwards said there is a great amount of energy involved in simply lobbing a baseball. However, the remarkable aspect of the accelerator is not that 10 BEV is such a tremendous amount of energy but that this much energy can be imparted to an electron infinitesimally light.

The electrons are injected into the pipe by a one-hundred-foot long linear accelerator. The electrons reach a speed very close to that of light. Contrary to a popular misconception, the atomic particles are not accelerated any more while making their journey every two and a half millionths of a second around the half-mile pipe. The synchrotron does not speed up the electrons but gives a boost to their BEV count.

The synchrotron is now operating at 4 BEV. When $7\frac{1}{2}$ BEV is successfully reached, physicists from other institutions will be welcome to begin their experiments. Hopefully, the maximum of 10 BEV will be attained sometime in the fall.

The experiments will continue in two directions: elementary particle physics, and testing the laws of magnetism and electricity in the tiny world of the atom.



The model of the laboratory building, now nearing completion. Main controls for the synchrotron will be housed here, along with other lab equipment.

"The Wants of the Hour . . ."

THE FIRST UNIVERSITY INSTRUCTION IN JOURNALISM

by BROOKE BRESLOW '68

On September 26, 1873, the Cornell University faculty approved President Andrew Dickson White's proposal to include instruction in journalism in the University curriculum. This gave Cornell the distinction of offering the world's first university instruction in journalism. However, this distinction received far less recognition and attention than it merited.

Like many other facets of American life, journalism was greatly affected by the changes following the Civil War. Railroads became one of the chief means of distributing newspapers and transmitting news. Postal rates were reduced, facilitating the mass circulation of periodicals.

These changes resulted in a literary "explosion." By 1870 there were 44.9 per cent more weekly newspapers published in the United States than in 1860.

By 1880, there were 11,314 newspapers in the country. Today, in 1967, that number has increased by less than 100.

The changes taking place in journalism were not unrelated to those taking place in education. In 1862, a law drafted by the Hon. Justin S. Morrill of Vermont was established, which resulted in the land grant colleges.

These colleges, the law said, would teach "such branches of learning as are related to agriculture and the mechanic arts . . . in order to promote the liberal and practical education of the industrial classes and the several pursuits and professions of life."

Under the provisions of this act, New York State became entitled to scrip representing 990,000 acres of land. So the Empire State became the beneficiary and trustee of the largest educational endowment that had ever been bestowed by the United States, or perhaps by any nation.

Horace Greeley, already one of the most prominent journalists in the state and nation, helped draft plans for the "People's College," which was to be the land grant institution in New York State. However, the officers of

the proposed college were unable to fulfill their part of the obligation in opening the institution, and Ezra Cornell, who donated his farm in Ithaca, secured the land-grant rights for another college, which became Cornell University.

During these pioneering stages of technical and other specialized education, the first efforts were made toward organizing college training in journalism.

In 1869, Gen. Robert E. Lee, then president of Washington College (later named Washington and Lee University), proposed a plan for using journalism to help rehabilitate the South. He suggested that boys intending to enter journalism could work out their tuition at the printing trade while taking the classical course in the college. The training was to consist of instruction in printing at a local plant, and it was designed to prepare the students for newspaper work under editors who were also practical printers.

Although this program was approved, Lee died the following year, and his instructional plan lapsed.

But his attempt was a major contribution to journalism education, because of the widespread attention it brought to the concept. A course in practical printing was initiated by John A. Anderson, president of Kansas State College, in 1873.

During this time, two New York State legislators, Ezra Cornell, and Andrew Dickson White, a polished educator and ex-diplomat, founded the institution "where any person can find instruction in any study."

Cornell, who had made his fortune laying cables for and buying stock in telegraph companies, felt strongly that students should do practical work along with and related to the courses they studied.

His ideas were further developed and strengthened after Cornell University received the money made available by the Morrill Act in 1862.

White, a Yale graduate and former professor at the

University of Michigan, specified that, "in the greatest state, there should be the greatest of Universities . . ." His goal was to establish a university which, he said, "by the whole scope of its intended sphere, by the character of studies in . . . its curriculum, should satisfy the wants of the hour."

White and Cornell viewed journalism as one such primary need.

Some leading journalists ardently favored journalism education; others expressed bitter antagonism toward it. The objections of journalists who were well-known nationally, and to some extent internationally, seemed only to add luster to White's poise, self-confidence, and courage as an educator. He appeared determined to train young men for news careers. Those approving journalism education included Whitelaw Reid of the New York Tribune, George W. Curtis of Harper's Weekly, and Joseph Pulitzer of the New York World.

Opposing journalists of the day included E. L. Godkin of the New York Evening Post, Frederic Hudson of the New York Herald, and Horace Greeley of the New York Tribune, who had planned the "People's College."

Greeley's comment on how to make an editor was, "I guess you'll have to feed him on printer's ink."

Whitelaw Reid replied, "There were thousands of brave men around Toulon, but only Napoleon could handle the artillery. It was the scientific training that gave his warlike genius its opportunity . . . The University may yet do as much for the embryo Bryants and Greeleys . . . who are to transform American journalism into a Profession."

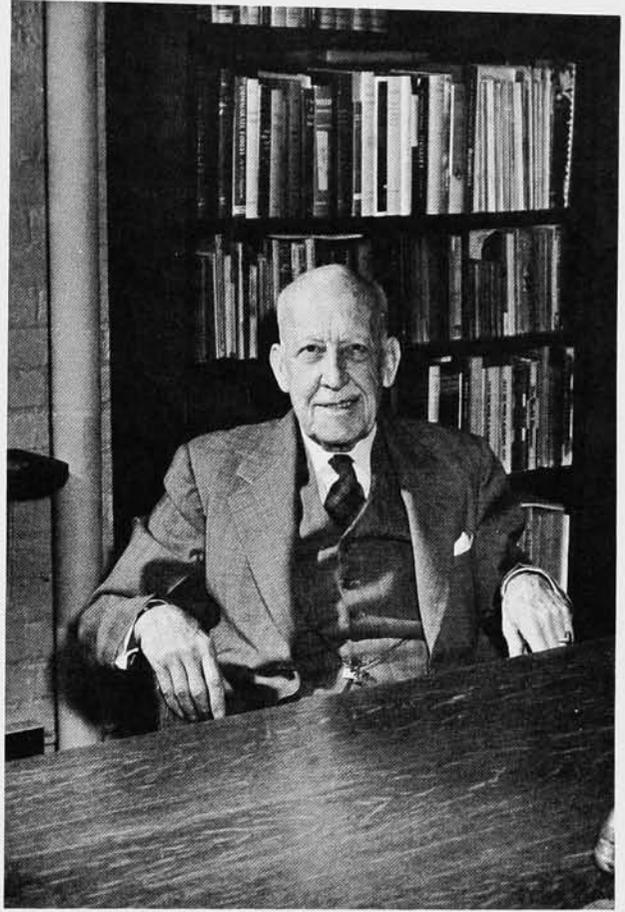
And so it came to pass that the world's first university level journalism instruction was offered in the Register of Cornell University in 1874.

Students were offered courses in the art of printing, including typesetting, copyreading, and layout. In addition to this practical experience, the students were offered courses dealing with the origin and development of the print media, the characteristics of journals of different countries, and the ethics of the industry.

The record show that only one student, Stephen Perry Sturges of New York City, was awarded the Certificate of Journalism with his B.A. degree at the 1876 commencement exercises. Because of the sparse enrollment, the course was dropped in 1877.

But other schools throughout the country were influenced by Cornell's synthesis of the practical and theoretical aspects of journalism education. In 1893, the Wharton School of the University of Pennsylvania instituted a journalism course which lasted until 1901.

Cornell University, however, had not discarded its concept of teaching journalism. Through the interest of William Strunk, Jr., who became widely known as the author of *Elements of Style*, and Brainard G. Smith, a journalism course was taught in the English department from 1888 to 1890.



Bristow Adams

In 1914, Bristow Adams, remembered by many as one of Cornell's most beloved figures, became a professor of extension, and taught a journalism course.

After Adam's retirement, his program was developed into the Department of Extension Teaching and Information, under the chairmanship of William B. Ward. In 1966, the department, still chaired by Ward, was renamed the Department of Communication Arts.

About 20 courses in journalism and related fields, from magazine writing to television production, are offered by the present department.

The embryonic program of the 1870's shows little resemblance to today's communication arts offerings, with modern-day communications calling for a much more wide-ranging curriculum.

White never heard of television, but his goal, that the University should "satisfy the wants of the hour," is still a living part of Cornell.

Editor's note: This article is a condensation of a paper by Bruce Underwood, Temple University. Professor Underwood served as an associate professor in the Department of Communication Arts, 1965-66.

TO EAT . . . OR NOT TO EAT

by NANCY KRUSE '70

"To eat or not to eat?" This is the question facing persons who like to consume mushrooms. The terms *mushroom* and *toadstool* are used by many collectors to designate respectively edible and poisonous species. Such a distinction is not recognized by the scientist. The two words are correctly used interchangeably, though mushroom is usually preferred.

Poisonous species are found in the woods around rotting logs and tree stumps; mushrooms growing in lawns are most likely to be safe. Mushrooms with the base stem swollen and species with bright colors should be avoided. Also, any mushroom with white gills or spore dust can be dangerous.

Professor Richard Korf of the Cornell Plant Pathology Department and other mycologists will identify samples upon request.



Amanita muscaria. A common, deadly poisonous species. Yellow-orange on top, this species has a greatly swollen base of the stem. Most of the "death cup" is carried up on the top of the cap as loose scales.

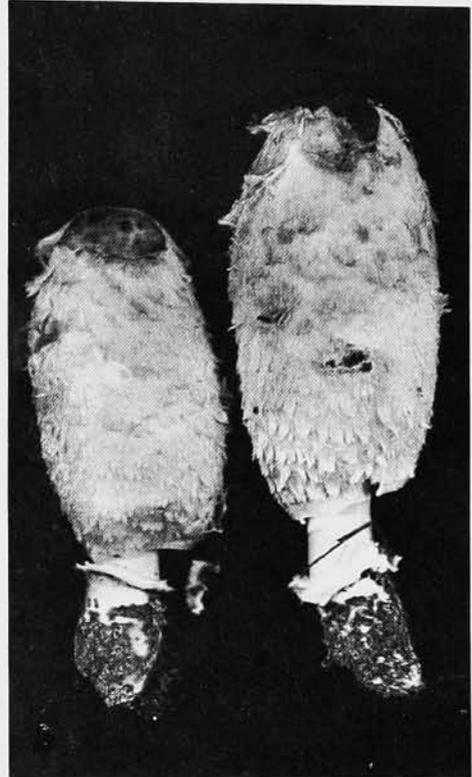


Clitocybe illudens. This is the orange-yellow "Jack-O-Lantern" fungus. It grows around stumps, giving off an eerie phosphorescence at night, hence the name. Though not deadly, it will cause severe illness if eaten.





Amanita bisporiger. This deadly poisonous, pure white species is common in the woods around Ithaca. Note the sac-like "death cup" at the base, which is usually buried in the leaf mold.



The "shaggy mane" *Coprinus comatus* grows in lawns, and is edible when still white. It soon deliquesces into an inky black liquid.



Agaricus arvensis.

This edible mushroom is closely related to the commercially grown variety you can purchase at the grocer's. Also found around Ithaca.



Peaks and a glacier in the Alaskan mountain range.

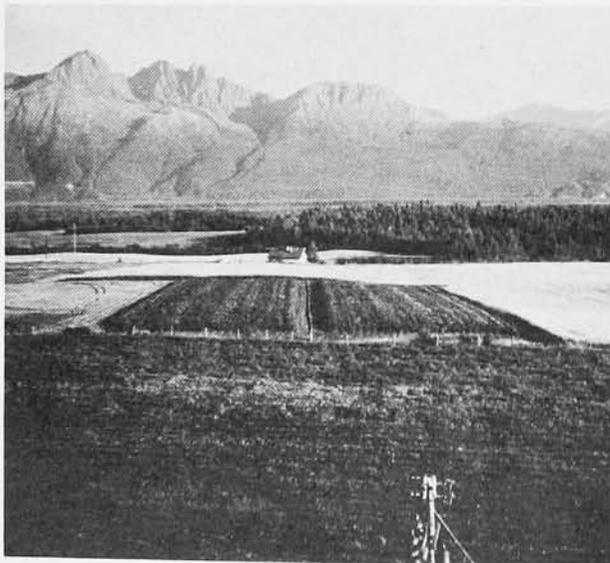
It started over a cup of coffee in the Ivy Room, the day after a particularly tough prelim.

"Bob," I said, "there must be some better way to live."

"Yeah," he returned, "when school's out, let's break from this grind."

And break we did. Just as far as we could go in one summer — Fairbanks, Alaska.

We — Bob Potter and I, both juniors in the College of Agriculture — pulled out of my home in Niagara Falls one day in mid-June. Our station wagon was loaded with more gear than the French Foreign Legion took to the



Potato irrigation test plot on a Matanuska farm near Palmer, Alaska.

NORTH TO

SUMMER VISIT TO THE A



Sahara. We agreed to cut costs by camping out and cooking our own food, and discovered that the costs cut were in direct proportion to our weight loss.

The TransCanada Highway was our route to the Canadian Rockies, a land of lakes, streams, and snow-capped mountains where we stayed until dwindling finances forced us to get to Alaska — fast! Traveling to Alaska by car, we learned, is a fearful experience.

The Alaskan highway officially starts at milepost "O," Dawson Creek, British Columbia. It ends at milepost "1541," Fairbanks, Alaska. Twelve hundred miles of that distance is gravel road. If you have ever been in a Waring blender filled with flour, you can imagine what the trip was like. Dust was everywhere! The oil in the crankcase turned to mud, and so did our mouths every time we took a drink of water.

After two and a half days on that road, we reached Fairbanks at three o'clock on a Thursday morning — weary, disheveled, dirty, and completely happy. We had little money, no place to live, and, worst of all, no job opportunities. But by Sunday night we were clean, rested, dust-free, employed, and proud renters of our own house.

Living in Alaska, especially in Fairbanks, is unlike any other place I have seen. The town, about the size of Cortland, New York, is the second largest city in the state. (Anchorage is first, and the total population of Alaska is just 250,000). In this "booming" metropolis, only a couple of the streets are paved. Sourdoughs, the authentic bearded, gold-panning characters, are still much in evidence, and still make a living panning gold in streams around Fairbanks. It is truly a frontier town.

Alaska may best be characterized by the variety of its people. In all my stay, I met only one native-born Alaskan, a baby six months old. Everyone else was a mis-

THE FUTURE OF THE GOLD RUSH DAYS

by GREG POGSON '69

placed "lower forty-eighter," the term used to designate the rest of the United States. When meeting people in Alaska, the standard question is not, "How do you do," but, "How long ya been here?" and "When ya gettin' out?"

Most Alaskans today are temporary residents, mainly young people who stay from one to five years. The wage scale is exorbitantly high (I was earning \$125 a week as a dishwasher and apprentice grill cook), but the cost of living is correspondingly high. Gas costs 60 cents a gallon, milk \$2.00 a gallon, and bread 60 cents a loaf. Young single men willing to sacrifice many of the comforts of home can make a lot of money in a few years.

But Alaska's permanent residents have a pretty rough life. It takes a long time to get many luxuries, and even some necessities are not always available. Replacement parts for machinery must be ordered and may take months to arrive. The state has very few paved highways, and food and entertainment are at a premium. The long winters are not conducive to work.

One of the most encouraging aspects of Alaska, though, is its rate of development. New roads and railroads and expanded air travel are continually creating a stronger link with the rest of the United States. This development, coupled with the tremendous enthusiasm of the people, will soon make Alaska one of the most advanced, comfortable, and modern states in the Union. Up there, people think big; everything is done on a grand scale.

Everyone thinks of Alaska as the land of igloos and dog sleds. I find it difficult to convince my friends that an Alaskan summer is much the same as an Ithaca summer. And it is still possible to go to the Fairbanks airport on a warm, sunny day and see tourists arriving in overcoats, mittens, and boots. They are startled, as I was,



The Portage Glacier near the Matanuska region.

to learn that dog sleds can be found only at the winter races held in Fairbanks. Most Eskimos today use gasoline-powered sleds as transportation in winter.

Despite many natural calamities (we left Fairbanks one day before a flood covered the city), Alaskans are enthusiastic about their state. Actually, the floods and earthquakes Alaska has experienced have, if anything, left the people more determined than ever to build and promote their state. Indeed, the slogan of the Alaskan Centennial Exposition, "North to the Future," is a meaningful prophecy.



The person in the picture is skiing on Finger Lake in Palmer, Alaska.

ARNOT FOREST: RECREATION AND RESEARCH

by RICHARD MARKHAM '68 and CHARLES WILSON '69

Looking for a quiet place to spend a Saturday afternoon? A place to commune with nature? A new place to hunt?

Less than 20 miles southwest of Ithaca is such a place, and you won't be trespassing because it belongs to Cornell.

The place is Arnot Forest, and, according to Lawrence S. Hamilton, professor of conservation and director of the Forest since 1954, "the Cornell community is invited to use the area for hunting, hiking, picnicking, and nature studies." He adds a word of warning, however: "The paramount purpose of the Forest is research and teaching, and nothing must interfere with this priority."



This totem pole, symbol of Arnot Forest, was brought here from Alaska in the 1930's.

How, you ask, did Cornell ever get into the forest business? The need for a forest was recognized as early as 1914 when the Department of Forestry (then at Cornell, now at Syracuse) requested "an adequate demonstration and experimental forest."

That same year, about 2,000 acres of forest were purchased by Matthias H. Arnot for his estate. The executors were ready to sell it to Cornell, but money was not then available. When Arnot died in 1926, his heirs donated the land to Cornell. Official transfer of the title was made in 1927.

The Forest was put to immediate use as a research and training center. In 1933, censuses were taken of all plants, animals, tree diseases, and insects of the Forest. Research was begun on the basswood cancer, the soils of the Forest were classified, and a soil map was prepared.

During the Depression years, Arnot Forest was used as a forestry camp by the Civilian Conservation Corps — a government project designed to provide jobs for the unemployed. The Corps worked at building trails, surveying the land, and planting new trees. In four years the Corps accomplished what would have taken 25 years under ordinary circumstances.

During the late thirties and early forties, the government continued to use the Forest for various projects, and in 1945 the Forest served as a prisoner-of-war camp.

When the Department of Conservation was established at Cornell in 1948, all of Arnot Forest became available for research, demonstration, teaching, and resource management studies.

The Forest reached its present size in 1956 when the federal government gave Cornell 2,000 adjacent acres.

Arnot Forest is valuable to conservationists because it is not unique. Its forest life is typical of that on more than 6 million acres along New York's Southern Tier.

The timbers of the present Forest are primarily second growth hardwoods — beech, maple, and hemlock. There are also considerable stands of white ash, basswood, and black cherry where former stands were cut but not burned. On the one-third of Arnot land that has been

An aerial view of Arnot Forest. Below the pond in the picture a house can be seen at the edge of the woody area.



burned over, there now stands aspen, pin cherry, red maple, and black birch. Small animals, deer, and many species of birds inhabit the Forest.

The Forest serves Cornell well as a teaching tool. Classes in forestry, woodlot management, ornithology, and wildlife management use Arnot extensively.

In addition to these teaching activities, Arnot Forest is the scene of many current research projects. One area of research involves farm ponds. Fifteen years of study of the many ponds in the Forest have resulted in attempts to meet the increased demand for better methods of farm pond management to produce fish for sport and food.

Researchers are working in the Forest to try to deter-

mine which conifers grow best on which soils. A by-product of this research has been much information on optimum soil conditions, spacing, and general management of various coniferous species.

Arnot Forest is also widely used for demonstrations. In September the performance of a Swiss invention called a "tree monkey" was tested. This machine climbs and trims a tree to a pre-set height, then returns to the ground. It does this in two minutes. The testers believe that this machine can replace hand labor in pruning and trimming trees and can produce knot-free lumber on over one million acres of timber land in New York State.

Since 1948, Arnot has been the scene of the 4-H Leader Training Conservation Camp held for one week each August. Boys, under the direction of Cornell's conservation and agronomy departments and the New York State 4-H Office, come to learn conservation skills which they will apply in their own areas. Each boy spends a week studying conservation of soils, water, forestry, and wildlife. Many of the boys attend for several years, each time concentrating on a different field.

A Teachers' Conservation Workshop, staffed by members of Cornell's rural education, conservation, and agronomy departments, has been held at the Forest each year since 1962. Field trips, lectures, and films fill the four days the Workshop meets.

A sap collection project was begun in the Forest in 1957. At first, sap had to be collected by hand, but today sap runs from the trees through tubing to central collection points. In less than 10 years this project has helped farmers increase the yield and quality of their maple syrup and reduce their labor by one-half.

Other Forest conservation projects include studies in forest pathology, plantations, wood preservation and utilization, tree improvement, chemical debarking, and chemoforestry.

Arnot Forest is surely one of Cornell's most valuable resources. So whether you want to study the wildlife or just relax, come on out! Or you'll be missing a big part of Cornell.



This new machine is called "the monkey." It can be used for cutting and trimming tree limbs.

The rate of population growth within the world is estimated to be increasing at an average rate of 2.1 per cent each year. If this continues, the world's population will double in 35 years. How will the poor and underdeveloped countries cope with this?

Developing the Underdeveloped: A BEGINNING

by JAMES OLIPHANT '68

Each night after a hard day of trying to get a roof over someone's head, or a cup of milk into a child's hand, Jef Fanning, former Cornell student and Peace Corps volunteer in Guatemala, confesses, "No matter how hard I try to steel myself against the suffering, I can't help having my very soul torn to pieces when I see these poor people suffering and dying."

More Americans, like Jef, are becoming aware of others who awaken each morning longing for food and warmth.

Though suffering still exists, the once sleeping nations of our world are stirring with a new life, breathing fresh air, and beginning their ascent from the depths of underdevelopment.

David L. Call, professor of food economics in Cornell's School of Nutrition, sees some hopeful signs.

"In Latin America, the Far East, and Africa, where populations are growing most rapidly, there has been a six per cent increase in per capita food production compared with the 1953-1957 period. Not enough to wipe out hunger, but certainly progress . . ." he says.

Call also predicts these developing areas, with the helping hand of more prosperous nations, will continue to expand their food production in line with their population growth in the next decade.

West Pakistan's promising agricultural development is described by Daniel G. Sisler, professor of agricultural economics at Cornell. "Since 1966, the use of fertilizers on West Pakistan's agriculturally productive land has more than doubled. New government and private installations of irrigation systems have utilized large amounts of ground water to transform once non-productive land into fields of wheat. Farmers have also been responsive to change and have adapted new, high-yield Mexican strains of wheat to their fields, thus boosting the projected harvests of wheat in 1968 to six million tons

compared to an expected production of four million tons in 1967," Sisler explains.

Many fear there will not be enough food to feed the world's rapidly increasing numbers of hungry people.

Kenneth L. Robinson, another Cornell professor of agricultural economics, warns, "Death rates have dropped precipitously in recent years from as high as 45 per thousand in some countries to about 20 per thousand, or even less. Birth rates, on the other hand, have remained relatively constant. Thus, the rate of population growth within the world is estimated to be increasing at an average rate of 2.1 per cent each year. If this rate continues, the world's population will double in 35 years."

Many economists, however, do not foresee a continuing, snowballing growth rate. Professor Call is optimistic. "Numerous birth control techniques are emerging within developing countries," he says.

"In India, where the growth rate is 2.5 to three per cent each year, bureaucratic roadblocks are crumbling, dangers of increased population growth are published on billboards, people are more receptive, and the birth rate is beginning to be controlled. By 1975, Indians can have a manageable growth rate each year of 1.2 per cent, not 2.5 or three per cent," he adds.

To nurture this beginning development and, hopefully, to spark new progress in other developing nations, the National Advisory Commission on Food and Fiber has recommended to President Johnson:

— United States aid programs for developing countries should be oriented heavily toward technical assistance for increasing food production and population planning.

— Establishment of a new, semi-autonomous institute to solve the current problem of long-term organization and funding of development programs in underdeveloped countries. The institute would be willing to devote any



Food line.
Sights like these are common in very poor and underdeveloped areas of the world.

of its resources to finding a solution to food problems of Communist Asia.

— Building and staffing of local institutions in developing countries for research, education, credit, and other functions needed to support agriculture.

— Food be available for disasters, crises, emergencies, and, as a traditional measure, to help developing countries as part of a definite, short-term plan for agricultural self-help.

In addition to these recommendations, Congress has recently passed new legislation which permits improvement of the nutritional content of United States foreign food through nutritional fortification, and supplementation of traditional foods exported in the past, through increased use of nutritionally adequate prepared food mixes, and through increased availability of foods of high nutritional content which in the past were excluded from our food aid programs.

Other new legislation authorizes the Secretary of Agriculture to establish and administer a program whereby American Farmers can participate directly in agricultural development with friendly nations. The program would create farmer-to-farmer assistance where farmers in the United States would teach practical aspects of increasing food production and improving the effectiveness of farming operations to farmers of developing countries.

A day when a Peace Corps volunteer won't have to steel himself against the dying, the sick, and the neglected, a day when food and shelter will be plentiful in a world of unity and brotherhood, may still be on a distant horizon.

The journey to that day has begun, and, hopefully, it will be a short one.

Milk line.
Children suffer the most in areas where starvation is common.



NEW DIRECTOR OF EXTENSION

Special to the Cornell Countryman

How does an entomologist become interested in cooperative extension? Dr. Edward H. Smith, recently named Director of Cooperative Extension at the New York State Colleges of Agriculture and Home Economics, Cornell University, puts it in this way, "The field of entomology has great appeal because insects are important as threats to man's food, fiber, health, and comfort. In addition, insects can do more things, biologically speaking, and do them better than can most groups of animals. After all, biological principles have broad application to all of the animal kingdom, including man himself."

Dr. Smith sees nothing strange in his moving from entomology to cooperative extension. "In working in the world of insects," he says, "I didn't leave the world of people. They share the same world. People have interested me, too, and I didn't stop communicating with them during my years as an entomologist."

In his new post, Dr. Smith sees a chance to become directly involved in the great problems facing our society. "It is an exciting challenge to seek solutions to these problems through the application of what our universities have to offer."

Traditionally, cooperative extension offers its services to commercial agriculture. Now that the number of people involved in commercial agriculture is declining, will the role of cooperative extension also decline? Not according to Dr. Smith.

"I envision that New York State will continue to have a strong commercial agriculture which will need our leadership today even more than in the past. And there are many needs outside commercial agriculture which we must consider. How is land retired from agriculture put to use? What can we offer in community resource development? What do we offer youth — urban and rural? How can our knowledge — of food and nutrition, for example — be put to use? These are but a few of the expanding fronts on which cooperative extension serves."

To be sure, cooperative extension is entering what is perhaps its most exciting era. Many problems which have only recently caught the public eye have long been areas of concern to cooperative extension. As an example, Dr. Smith cites the 4-H program for youth. "It is an impressive success story. Its traditional stronghold has been in the rural areas. Now we are concerned with modifying this successful formula and applying it to the vast urban areas where the need is so acute."



Edward H. Smith

In Dr. Smith's words, "Research and extension must go forward hand in hand or both may end up in left field with no base of support. The society which supports them has the right to expect that they proceed with its needs in mind. This in no way implies any lack of support for basic research. Indeed, society needs this as the hard core from which our applied research must spring."

Dr. Smith earned both M.S. and Ph.D. degrees at Cornell. He returns to the hill from North Carolina State University where he was chairman of the entomology department. Throughout his career he has devoted special effort to communicating with lay leaders, government officials, and industrial leaders on the application of research to practical needs.

What will characterize "Smithsonian" extension? The key words are *relevance* and *involvement*. "I hope," Dr. Smith says, "that the hallmark of the program under my direction will be relevance to and involvement in the great problems facing us. But let me stress two points: first, I inherited a strong organization, and, second, the director is but one member of a vast team and only team effort will make our goals a reality."

COUNTRYMAN CAPSULES

The N.Y. State College of Agriculture at Cornell appointed its first professor to be responsible for international aspects of plant protection.

H. David Thurston was appointed professor of plant pathology, and has joined the International Agricultural Development program. He will help develop a training and research program in the plant sciences in tropical countries.

Thurston, who spent almost 11 years in Colombia, South America as a plant pathologist with the Rockefeller Foundation, headed the plant sciences division of the Colombian program at Bogota, Colombia.

A native of Sioux Falls, South Dakota, Thurston received his doctorate from the University of Minnesota in 1958. During 1957-58, he was an instructor in the department of plant pathology there.

At Cornell, the new professor's work will include research and teaching in the international aspects of plant diseases and their control. Students from foreign countries will be selected on the basis of familiarity with their work in their home countries. Guidance during their formal graduate training at Cornell, and supervision of their thesis research will round out the program.



Editor's note: On page 6 of the October issue, the *Countryman* did not include the name of George G. Gyrisco as author of "How to Beat the Evil Weevil."

To all alumni: Your *Alumni Page* misses you. By not sending any word of how and what you're doing, we've gotten out of touch. Have you seen a fellow alumnus lately? Have you picked up a new hobby? Please let us know where you are, and what you are doing. Drop a note today: *Cornell Countryman*, Roberts Hall, Ithaca, New York 14850.



A Cornell embryologist has finished analysis of more than 5,000 publications in researching the changes in amounts of the various chemical substances in developing bird eggs.

Professor Emeritus Alexis L. Romanoff, of the N.Y. State College of Agriculture at Cornell, collaborated with his wife in analyzing the material and writing a book, "Biochemistry of the Avian Embryo: a Quantitative Analysis of Prenatal Development."

The study was made to meet the growing need for knowledge of chemical embryology, Romanoff said.

Scattered research findings in many languages are now available in one source to scientists working in the biomedical sciences and other biological fields, as well as to students and teachers.



The College of Agriculture Alumni Association and the New York State College of Agriculture are sponsoring an Open House on the campus at Ithaca, New York, Saturday, November 18.

On this occasion, high schoolers will have opportunities to learn more about the many fields of study available in modern agriculture.

Information on admissions, graduation requirements, and vocational possibilities will also be made available.

Participants will have a chance to ask questions of undergraduates in the College of Agriculture, tour the Cornell campus, and visit informally with members of the faculty.

Visiting students will be guests of the College for lunch.

Alumni arrange transportation for those wishing to attend Open House. Alumni and friends of the College who know of high school students interested in this event and do not know whom to contact in their counties should contact John Spencer, admissions counselor in the College of Agriculture, Roberts Hall, Cornell University.

The Open House program is scheduled to begin at 10 a.m. and conclude by 3:30 p.m.

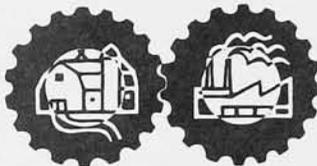
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NATIONAL FARM-CITY WEEK, NOV. 17-23

FARM AND CITY

1955



1967

PARTNERS IN PROGRESS

"In less than a generation, the American farmer has created a greater agricultural abundance than his predecessors through all the generations of our history achieved.

"One farmer today feeds and clothes himself and 39 others — almost four times as many as he sustained a quarter of a century ago.

"The average consumer today enjoys a more abundant supply of food than any people has ever known — and he pays a lesser share of his income for it than ever before.

"One of the most vital contributions to the achievements of American agriculture has been understanding and cooperation between farm and city — an interdependence that has supported our National development."

With these words, President Johnson proclaimed November 17 through 23 National Farm-City Week, a week designed to increased cooperation and understanding between the rural and the urban segments of our nation.

During this week, organizations and individuals will participate in activities which will strengthen the bonds between the farm and the city, activities that will promote greater cooperation in solving the problems common to both.

Also during this week, the first of the 1967 "Big A" awards will be given by the New York State Farm-City Council. Established last year, these awards recognize those communities in New York State which have been outstanding in promoting farm-city cooperation during the year.

The New York State College of Agriculture at Cornell supports these awards and the effort they imply. The College believes that the problems and successes of each member of the rural-urban partnership reflect on both, and seeks constantly to advance this partnership in progress.

ALBERT R. MANN
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CORNELL COUNTRYMAN

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ON THE COVER

*Montagnard children of the Rhade tribe,
central highlands of Vietnam. (See story
on pages 8 and 9.)*

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CORNELL COUNTRYMAN

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Cornell's Culinary Revolution

by CLAIRE GARRETT '70

This fall, returning Cornellians were greeted by the Department of Housing and Dining with a new meal plan and new facilities in which to use it.

Cornell is one of the first colleges to adopt this type of meal plan which entails the use of meal books with detachable tickets, allowing dining in many areas around campus.

It is the coed who benefits most by the liberality of the system. For the first time in the history of Cornell, coeds may use the meal plan to eat anywhere on campus. Coed dining has finally become a reality.

Girls are required to eat only the breakfast meal in their own dining unit. Lunch and dinner may be eaten in Noyes Lodge, Noyes Center, the Straight, Martha Van Rensselaer Hall, Statler, or the Dairy Cafeteria, in addition to any of the girls' dorms.

Men on the meal plan may now eat in the girls' dorms.

There were three main reasons for the inauguration of this new plan: first, the persistent coed demand for more flexibility as to time and place of eating; second, the repeated request for coed dining; third, the completion of Noyes Center, providing additional eating facilities to absorb the crowds wishing to take meals on campus. It is hard to determine exactly how much influence last year's student food boycott had on the Department of Housing and Dining, as that office had been studying the problems for some time.

It was the remodeling of the dining area in the Straight that became the greatest conversation piece. It was not without nostalgia that upperclassmen witnessed the death of the Ivy Room and its rebirth on the site of last year's cafeteria.

The Ivy Room's U-shaped food line operates according to the "scramble" system. This means, for example, that the dieting coed can skip from the short order counter directly to the beverage counter without having to tempt herself by inching along the dessert counter. At the end of the line there are now three cashiers instead of just two.

The new dining system is not without its drawbacks. The coed gains more freedom but Housing and Dining

is losing money, and this most probably will be felt by the student in the form of increased food prices unless the system can be mended soon.

Housing and Dining official Frank Pearson outlined the problems inherent in the plan. He said every meal plan is based on a calculated percentage of absenteeism. In order to serve campus meals at the lowest possible price, Housing and Dining counts on the fact that a certain per cent of the prepaid meals will never be redeemed. But, fewer meals are going unredeemed now as the meal tickets may be used anywhere and during such broad hours. The system is further undermined by frugal girls who are out to get their money's worth. They pack their trays with more food than they know they can eat and either carry it back to their rooms or befriend hungry boys.

Another problem that faces the dining units is that of food wastage. Cafeterias simply do not know beforehand how many people will be eating how much, where, and for which meal. This varies with the weather and with individual whims. Not much of a problem for Noyes Lodge or the Straight, which are serving nearly up to their capacity, the inability to predict where the crowds will be does cause some problems in the girls' dorms. Fifty per cent fewer meals than last year are being eaten in the dorms, especially lunches. The number of boys taking advantage of being able to eat meals in the girls' dorms doesn't approach the number needed to counteract the loss of the coeds now eating at other locations on campus.

It is difficult to assess the problems that have been traded for greater meal time freedom. That must wait until students become used to the new freedom and settle down into definite eating patterns.

Perhaps the Cornell coed will soon tire of waiting in line for 45 minutes in Noyes Lodge for a cheeseburger and will take the one minute walk to Balch for an immediate serving of a meal.

Some of the first customers at the Agnes and Jansen Noyes Center's food facilities.



ADOLESCENTS AND THEIR ART

by TAMAR ASEDO '69

Do adolescents have an art form all their own? That is what Prof. W. Lambert Brittain, department of child development and family relations in the College of Home Economics, is trying to determine. The U.S. Office of Education must be curious too, since they gave Dr. Brittain a grant to do his research.

The art of young children is very easily recognized by a large head and small arms extending outward. This art form has been characteristic of young children for generations. "Six year old children now do the same art work their grandfathers did at age six," says Dr. Brittain. "The art of the elementary school child is dependent upon developmental stages more than anything else."

In great contrast to the elementary school child, the junior high school student is more concerned with society. He is interested in what is happening around him, how he is changing, and how people are reacting towards him. Topics like sex, drugs, and smoking are of great interest to him.

To see if there was anything characteristic about adolescent art, Dr. Brittain held art classes this past summer for 20 boys and 20 girls who had just completed the seventh grade in the Ithaca area. These youngsters, ranging in age from 12 to 14, were not chosen selectively, but were merely those interested in attending art classes. Dr. Brittain felt no need to control for socioeconomic status, intelligence, and the like, since he was trying to form theories rather than test hypotheses.

There were three teachers who instructed the classes, two men and one woman, and they were helped by two research assistants. Several experiments were tried during the three weeks, including an attempt to vary teaching methods. One teacher would say, "You can work with these supplies, and I will teach you what to do with them." Another would say, "Here are the supplies and I will help you find your way to use them." And the third teacher would say, "Here are the supplies, but what you do with them is not as important as what you are trying to say with them." The students were free to work with whomever they preferred. Rather than seeking instructional assistance, they asked, "Where can I find more blue paint?" or "I need a brush with a sharp point."

Dr. Brittain thinks the art curriculum in the junior

high schools is perhaps outdated for the student of today. The adolescent is not interested in just drawing still life objects, learning perspective, lettering, or other basic techniques of art. Pop, op, and psychedelic art are much more intriguing to him. However, very few junior high school art teachers would dare to teach such things.

Adult standards in art are being imposed on the adolescent; what is considered good art by an adult may be

Boys at work on sculpture. The children in last summer's project ranged in age from 12 to 14. They had just completed the seventh grade in Ithaca area schools. The art interests of adolescent boys differ greatly from those of adolescent girls. Boys are involved usually with drawing things like cars and machines — anything representing virility and masculinity. Girls, on the other hand, often draw things like flowers, romantic scenes, fashions, and other feminine things.



meaningless to an adolescent. The youngsters seem to have different criteria in evaluating art. This was demonstrated by the youngsters' choosing different pictures for what they think their parents would like, what their teacher would like, what they would like, and what their peers would like. Many of them said their peers would like pictures dealing with sex, drugs, and smoking, but also said they themselves would not!

There were sex differences as far as subject matter of the art work was concerned. This may be because of the differing involvement in society of the adolescent girl as compared with the adolescent boy. Girls are concerned with fashions, romance, flowers, and whatever is feminine. Boys, on the other hand, are very involved in cars and machines of any kind, and anything representing virility and masculinity.

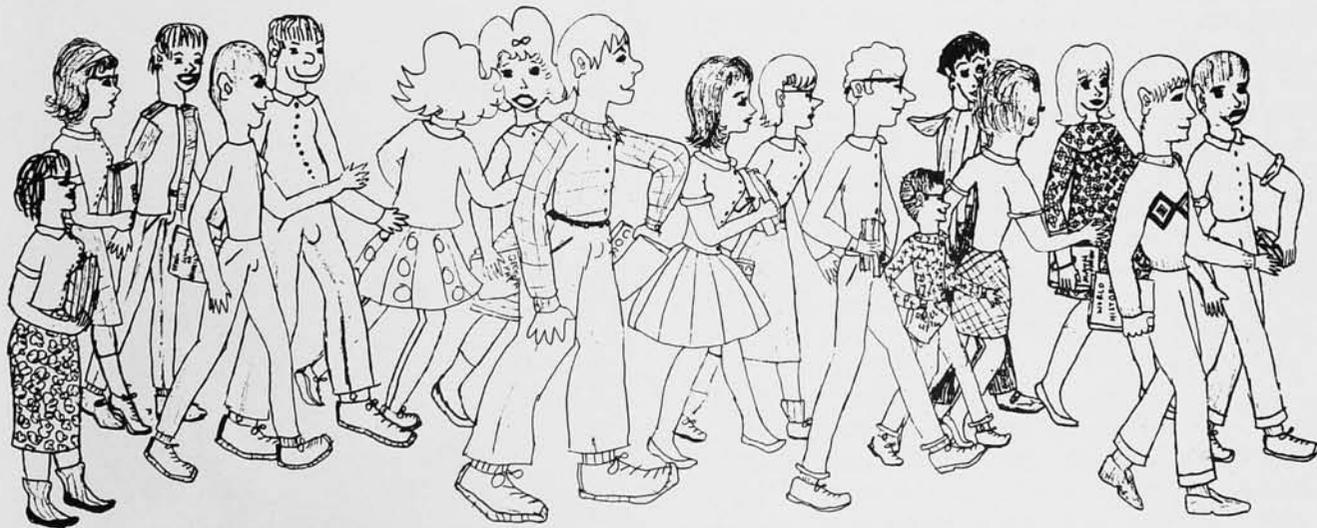
Since the adolescent girl matures earlier than the boy, she is involved in society in a different way; therefore, Dr. Brittain considers this a sex difference rather than a developmental one.

It is interesting to note that, to the untrained eye, the art of a 13 or 14 year old would be indistinguishable from the art of the average man-in-the-street. Dr. Brittain says that is because the developmental influence in art stops at approximately age 12.

Dr. Brittain has not as yet gone through all the information he obtained from the summer's experiment, so he was unable to specify any definite conclusions he might draw. He does think, however, that the art curriculum of the junior high schools is in great need of revamping. Perhaps this study, when completed, can help educators to create a more useful art program for the adolescent.



A student and one of the instructors in the summer study. The group was making "protest posters." Of those posters visible here, one says "Help Stamp Out Opera." Another declares, "Studying Causes Cancer." Are these typical adolescent attitudes? Prof. Brittain says the art of a 13 or 14 year old would be indistinguishable from the art of an adult because the developmental influence in art stops at approximately age 12.



This interesting drawing was done by a junior high school girl. It shows acute awareness of sex differences, Prof. Brittain says. Girls are more aware of sex differences at this age than boys are, according to the professor. He thinks the artist is the girl in the middle of the picture because she is the most attractive. She might like the boy on the right wearing a diamond-patterned sweater, since he too is drawn a little better than the rest of the group.

Well Versed Embryologist

by MARYA DALRYMPLE '70

Behind the opaque glass door of room 105 Rice Hall, in a tiny room cluttered with papers, books and paintings, can be found a man dedicated to living—a man devoted to the promotion of science and the fine arts. Professor Emeritus Alexis L. Romanoff, one of the foremost embryologists in the United States, if not the world, is a time-conscious person, concerned with truth and beauty. He states, "I, as a man, am a product of heredity, social environment, and circumstance. But man himself is nothing. It is his work and accomplishments that are everything."

Professor Romanoff has innumerable accomplishments to his credit. Foremost of these, in the field of science, are his three books, *The Avian Egg*, *The Avian Embryo: Structural Aspects*, and *The Biochemistry of the Avian Embryo*. The information found in these books is a result of years of research.

It is Professor Romanoff's theory that a person "should adhere to facts, not hypotheses; for although facts are often hard to obtain, they are indestructible." Consequently, he has used only original articles as sources and references for his own works.

He consulted more than 5,000 publications to gain information for *Biochemistry of the Avian Embryo*, for example. This book marks the beginning of the search for biochemical laws that govern prenatal development. Not only are his books useful in experimentation with birds, but they also have important bearing on studies of the human embryo.

Born in Russia, Romanoff attended Kazan and Tomsk Universities, also studying at Vladivostok Polytechnical Institute. As a youth, he exhibited interest and talent in the fine arts, particularly painting and verse writing. An excellent portrait painter, he had at one time considered making art a career.

In 1921, he came to the United States, entering Cornell two years later. He received his Ph.D. from Cornell in 1928. His love of art was gradually displaced by a stronger interest in embryology. As his studies of the egg became more intensive, his time for painting and poetry grew limited.

Professor Romanoff is also the author of four volumes of poetry. Always an admirer of such great poets as Pushkin and Byron, he felt inspired by them and began

to write his own verse in his spare time. "My poems were written as a means of relaxation, to bring relief from constant research and to alleviate stress," he explains.

Emerson once said, "The true poem is in the poet's mind," and this is true of Romanoff's verse. In "About the Author," Romanoff describes his relationship to his poetry.

He started eagerly in art—
In portrait painting from his heart,
But ended with a classic rhyme
By budgeting his leisure time...
An avocation to his field
Of science—with a promised yield.
These shifts have aided him in strife;
True efforts have enriched his life.

He believes the true challenge in life is to attempt what is most difficult first. In another of his poems, Romanoff writes:

... Meet what comes tomorrow
And do your best each coming day
Yet do not thrive on what you borrow
Create your own and make it pay.

Professor Romanoff appreciates life in its simplicity. Truth is his guiding force, the force which has made him the exceptional man he is today. He has learned from the efforts of others and has given us a scientific and poetic record of his own experiences. Yes, behind the door of room 105 Rice Hall is the man whose devotion to the betterment of mankind can serve as inspiration to all of us.



Professor Emeritus Alexis L. Romanoff

HORMONES, RATS, AND LONGEVITY

by MARY JANE FERGUSON '68

When retirement came two years ago for Dr. Sydney A. Asdell, he was supposed to be undergoing the process of aging, not investigating it. However, his work in the Department of Animal Science was not finished and he wasn't going to leave until it was.

Asdell knew that female rats, like human females, live 10 per cent longer than males, and he wanted to know why. In 1963, he completed a four-year study designed to find out whether the difference in hormones or the difference in genes between the sexes was the cause of the female's 10 per cent bonus lifespan. The study also tested whether reproduction in itself affects longevity.

Results indicated that the male hormone shortened life in both sexes and the female hormone prolonged it. Implants of testosterone, the male hormone, shortened the life in both sexes, but implants of the female hormone, estrogen, prolonged the life only of the males and had no effect in the females. In females, however, removal of the estrogen-producing organs, ovaries, did shorten their lives. Castration in males prolonged their lives.

The experiment also showed very little difference in the mean lifespan of males used for breeding and those not used. On the other hand, unbred females were found to live longer than the females who were allowed to breed normally.

Other observations made during the experiment showed that estrogens definitely reduced the growth rate of the rat. The question is then whether a slower growth rate in females is the answer to their longer lifespan. "If so," Asdell speculated, "doesn't this have implication for the way we feed our children as they grow?"

Another observation made from the study was that male and female rats receiving estrogen implants were more restless than the others. With androgen implants females with their ovaries removed showed even greater activity than they did with estrogen implants, but castrated males given androgen showed no activity increase. There seemed then to be a sex difference in the brain responses of males and females since the males only responded to estrogens while the females responded to both estrogens and androgens. "Is this genetic?" is the question Asdell would like to answer.

After completing this experiment, Asdell planned to work with hamsters, whose males, unlike rats and humans, live longer than females. He hoped to find out

why they differ in this respect and what kind of hormone set-up they have. He ran into experimental troubles, however, because the female hamsters kept killing off the male hamsters all the time, so he could never accurately record lifespans. "Such are the vicissitudes of science," Asdell said philosophically, and continued his research with rats.

Another, more dramatic, "vicissitude" occurred on the "663rd day of the experiment when all 650 rats were wiped out." The rats, part of an experiment on the effects of reproduction on aging, were killed when the air conditioning unit in their lab reversed itself one night and overheated them. The whole experiment was lost.

Prospects of such troubles didn't deter the doctor from becoming interested in the problem of aging when he began his career at Cornell. As early as 1930, scientists here were running nutritional studies on aging, and the then-new professor became involved.

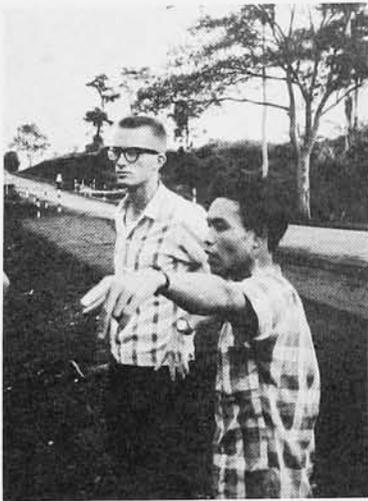
Asdell came to Cornell from the University of New Zealand where he spent two years after a year in the United States on a Rockefeller Fellowship for research and study at the Universities of Rochester and California.

He received his B.S., M.A., and Ph.D. degrees from Cambridge University and worked at the Cambridge Animal Nutrition Institute as a research assistant while he was studying. At Cornell, he began teaching the physiology of reproduction and lactation in the laboratory of animal nutrition which had just been established.

Asdell spent 1952-53 as a Fulbright Professor to the Royal Veterinary and Agricultural College, Denmark, and as a special University lecturer at the Royal Veterinary College at London University. He has lectured all over the United States and the world — in Tokyo, in Copenhagen, in Ithaca, to name a few places.

One of his present projects for retirement is revision of his book *Cattle Fertility and Sterility*, first published in 1955 and now in its fourth printing. Last year he finished a book titled *Dog Breeding* which condenses facts about reproduction and genetics in simple terms.

In the past Asdell has prepared over 200 articles and research papers for technical and professional magazines and journals and the *Encyclopedia Britannica*. In the future, he will continue to write and revise his work, but his last rat died in August so Asdell's well-over 30 years of teaching and experimentation are at last completed.



Cornellian Jim Linn discussing the development of the Montagnard Agricultural Training Center with Y-Sui Hmok, the provincial agricultural extension agent.

One viewpoint on the Vietnamese war that is sometimes hard to get is the one held by the man who has been there.

Jim Linn, a February 1965 graduate of the New York State College of Agriculture, worked in Vietnam for more than two years as an agricultural extension worker and administrator. Jim was up here recently recruiting for International Voluntary Services (IVS), an independent group of volunteers working in Laos and Vietnam, as well as countries in other parts of the world.

A short time before Jim Linn's visit, a lot of publicity had been given to the return from Vietnam of Don Luce, who got his master's degree at Cornell and who was director of IVS in Vietnam. Luce and several co-workers returned, they said, because they could no longer work effectively under the pressure various United States Government agencies were putting on IVS volunteers. Some thought the Vietnamese were growing to think of IVS as an arm of U.S. Government.

Since IVS is said to have served as the model for the



A Canadian IVS'er, who teaches English, watching a Montagnard demonstrating a native "ding nam," which translated means "gourd with five bamboo tubes."

VETERAN



VIE

by **BRADLEY J. BERTHOLD '68**

Peace Corps, much interest was raised by newspapers and magazines about the returning of the top-level volunteers. (It should be stressed, however, that Luce wants to return to Vietnam soon. He might go with a university or church group).

What did Jim Linn think of the whole situation?

"IVS people work on a person to person basis," he said. "It's working with individuals. Not program oriented, but oriented toward making friends with and thereby influencing particular individuals. This isn't the kind of thing you can put on a five-year plan," Linn continued.

The big American buildup in Vietnam in recent years has caused some difficulty with aid programs there, Linn said. "There are more and more Americans, especially since last year and the year before, coming in," he pointed out. "The Americans who are supervising other Americans sometimes don't get a good idea of the thought patterns, the culture of the Vietnamese.

"Americans do things in a very dynamic and forceful way. That's not the Vietnamese way. The Vietnamese do things gently, with as much tact as one can muster," Linn explained.

"As the American experience in Vietnam has developed," he continued, "there has been a lot of pressure on IVS to 'become part of the team.' That's something we don't want to become. It takes the personal element out of it. This type of pressure is growing every day.

"America is trying to Americanize Vietnam. Don Luce left not just because of the pressure on IVS, but also because of pressure in this direction on the Vietnamese," Linn said. "The Vietnamese students in particular said, 'If you really want to help us, stop this war' (in the sense of putting things in a better climate for development)."

"But," Jim Linn stressed, "Don and I are well aware an American pull-out now would be chaos — we can't. We couldn't have it." (Last month Luce spoke at Cornell. He said the United States should withdraw if possible, and an international peace team should be sent in.)

AM



VOLUNTEER

The IVS volunteers live on approximately the level of their Vietnamese counterparts, Linn explained. They get \$80 a month and round trip transportation to Vietnam, plus a living allowance in local currency for housing. The dollars come from the United States Agency for International Development, Linn said.

In three years, there has been a 300 per cent inflation in Vietnam, according to Linn, but only a 50 per cent rise in wages. Since the IVS people use local currency for expenses, the volunteers may get "a better appreciation of what the Vietnamese are facing," he said.

The Cornell graduate explained that one U.S. official, complaining about IVS's insistence on operational independence while spending American dollars, said, "When it comes to biting the hand that feeds it, IVS is like a rabid dog."

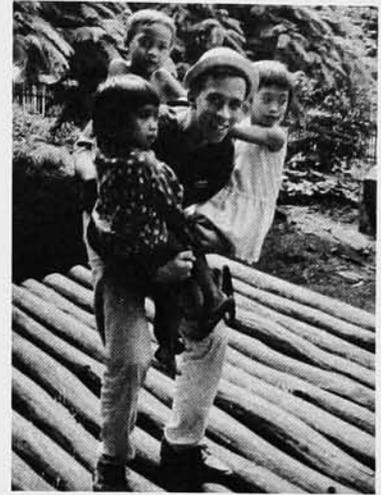
"This might not be complimentary to IVS," Linn noted, "but when it comes to our independence from American A.I.D., we're justifiably adamant. We are independent!

"American A.I.D. has some of the best qualified people I know — they're doing excellent work in many cases," Linn added. "But that organization is somewhat topheavy right now. They have enough Indians, but too many chiefs."

South Vietnamese hostility is on the increase in some areas, Linn said. Some of the Vietnamese student groups are upset at the attitudes of some Americans towards the Vietnamese people. "The students say some Americans take the attitude, 'We're here to help you guys and you ought to appreciate it, dammit!'" Linn said. "And of course, whether we help them or not is really up to them."

"Vietnamese students are very interested in community action and welfare programs," Linn explained. "But they are incensed, and quite honestly incensed, about the direction their country has taken. They don't want to become a puppet of a Western power. The students I talked with weren't holding back any punches when it came to complaining about things Americans have done," Linn concluded.

Tracy Atwood, a graduate student at Cornell, and three Montagnard children. The children shown here are from the Rhade tribe.



IVS is making a productive contribution, Linn stresses. "The recent publicity was good for us. A lot of people heard about IVS," he said.

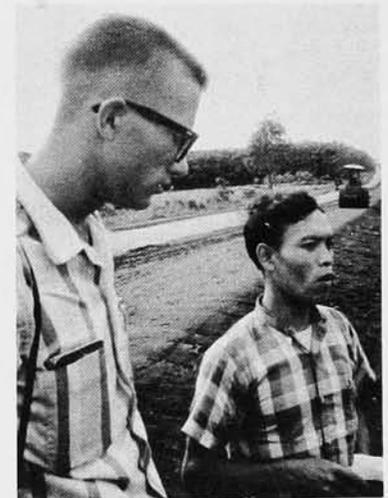
What kind of training do most IVS'ers have? "I'm the exception rather than the rule," Jim Linn says. "I actually got some training in Vietnamese before I joined IVS." Jim said he knew a full term ahead of time that he would be joining IVS, so he took a course in Vietnamese here at Cornell. Most IVS'ers get language training after volunteering.

While he was here recently, Jim had interviews with students from the agriculture, arts, and engineering colleges. "There's always a phenomenal turnout at Cornell," he said.

"Cornellians have a fabulous reputation in IVS, whether from ag, arts, or whatever," he concluded.

Jim Linn is debating whether to return to Vietnam or take up dairy farming in upstate New York. After talking to him and hearing his story, one would hope he would go back and continue his valuable work in war-ravaged Vietnam.

Jim Linn and Y-Sui Hmok. In the background a road-widening project is visible. This picture was taken in Ban-Me-Thuot in the central highlands of South Vietnam.



Outing At Cornell

by ANTHONY INGRAHAM '69

Sprinkled throughout the Cornell community have been people who find some of their greatest joys in activity in the outdoors. This generally does not include football players, sports-car enthusiasts, or groundskeepers (although these people could have the interests I talk of). I mean the people who enjoy activities that have as their primary end associating the individual in some manner with the land.

Different individuals have favorite ways of doing this. Some go hiking, canoeing over lakes, birdwatching, and general camping. Others prefer climbing horrendous cliffs of rock or ice, taking kayaks down thrashing rivers, climbing mountains, and exploring caves. Still others like skiing, snowshoeing, bicycling, survival camping, song fests, and working with their hands to produce useful items from wood, leather, and other natural materials. Most of these people are interested in all these things, which I shall label "outings." Hence evolved the need for a structure to organize these people for their mutual convenience in pursuing their pleasures — The Cornell Outing Club.

The Outing Club is not new. It was officially recognized in 1938 when Bob Udall was its first president. For most of the years since then, it has been meeting in Johnny Parsons Outing Center ("Japes") at the west end of Beebe Lake. Here the Club keeps its equipment and organizes its adventures. During the warmer months, people may come to Japes and rent a canoe to use on the lake or a bicycle to explore the back roads around Ithaca.

The weekly meetings have been open to anyone interested. A little time is spent on business, but most is used for giving trip reports and future trip plans. Each meeting is followed by a short slide show or movie, usually covering an interesting region or activity.

The real service that the Outing Club does for the Cornellian is give him an opportunity to get out of town, in spirit if not always in body. Weekend caving trips range all over the northeast, and during vacations get down to Virginia and West Virginia where the best caves are. Mountaineering trips usually go to the Adirondacks and Catskills, but vacations have allowed Outing Clubbers to travel to the White Mountains in New Hampshire, Mt. Katahdin in Maine, and even the Gaspé Peninsula in Quebec and the Great Smokies.

Whitewater canoeing trips take Outing Clubbers all over middle New York and into Pennsylvania. Rock-

climbing takes people to the "Gunks" near the Hudson River. Most other activities are in the countryside around Ithaca, but do a good job of removing one from the campus atmosphere. In winter, people ski the back roads on Connecticut Hill. The Club owns an old farmhouse out in Caroline where there are frequent overnights, and tobogganing in the winter.

Almost every weekend, there are nature hikes. Usually someone specializing in ornithology, entomology, or botany will lead such a trip. In addition, there are frequent hikes to explore local creeks and gorges. The Club maintains a section of the Finger Lakes Trail which passes just south of Ithaca. In the fall and spring, trail crews blaze new sections of this footpath that will eventually traverse the state. Outing Club is also responsible for two lean-tos on nearby Mt. Pleasant for overnight camping.

It may surprise readers to learn that upper Fall Creek is one of the better streams for whitewater canoeing in the area. After a substantial rainfall, Outing Clubbers will drop their books, take up paddles, and run the creek in kayaks and canoes.

Several club-sponsored square dances are held each year. Other, rather original club activities have been run on campus, such as igloo-building on the Arts Quad, snowshoe racing around the Arts Quad, and the "Anything-That's-Not-a-Boat" race that was held on Fall Creek last spring.

The Outing Club does not require membership (although it is more convenient) for participation in its activities. It is open to anyone in the Cornell community. The Club owns and rents most of the specialized equipment a person would need for any outing activity. The Club is not bound by traditions. New ideas are always encouraged and new people always welcomed.

Snowshoeing near Ithaca.



KEEPING THE PUBLIC INFORMED

by ALEX HARWOOD '68

Many Cornellians think the work of the N.Y. State Colleges of Agriculture and Home Economics is limited to the campus. Relatively few of them know that the Colleges serve New York State and the globe with more than 2 million extension bulletins, experiment station bulletins and memoirs each year.

According to Blanche Symons, distribution supervisor for the Department of Communication Arts, the extension service which the Colleges have today had a modest beginning around the turn of the century. "It all started," she said, "with the College of Home Economics' Reading Series for the Home,' and the College of Agriculture's 'Reading Course for the Farm.'"

Miss Symons said that these two publications had a run of little more than 100 copies and were quickly superseded by the millions of pamphlets and booklets now distributed by the Colleges.

"These bulletins," Miss Symons reported, "are distributed upon order to anyone who requests them. The entire distribution operation," she said, "hinges around the yearly list of bulletins. This yearly pamphlet," Miss Symons said, "is the only one for which a mailing list is kept."

Naturally, most of the bulletins are requested by New York State residents. "But the thing many people don't know," Miss Symons said, "is that we have requests from all over the world for our bulletins."

What are the publications about? According to Gunnar Mengers, extension bulletin editor, they can be on anything from Christmas decorations to "The Economics of Poultry Manure Disposal," and go to a "quite varied audience, not just farmers."

"For the most part," he said, "they're written by faculty members, but it's not simply a matter of someone sitting down and writing up a bulletin and then presenting it to me for publication."



The entire operation is planned yearly by a committee which outlines the publications to be printed, reprinted, or revised. They consider the necessity of new bulletins and much more. However, it's up to Mengers through his estimates of the cost of the respective bulletins to keep his operation within the \$150,000 budget allocated.

The memoir series, distributed through the Department of Communication Arts, is comprised primarily of reports on research projects and is directed at the scientist or researcher, while the experiment station bulletins, according to Dorothy Chase, experiment station bulletin editor, are halfway between the extension bulletins and memoirs. "They're reports of research geared for practical use by top farmers and agribusinessmen," she said.

Miss Chase said that the number of bulletins printed varies greatly each year, but for the most part averages between 20,000 and 60,000. This, along with the smaller number of memoirs and the much larger number of extension bulletins and Home Economics bulletins, makes up the 2 million publications mailed out yearly through Miss Symons' office. But it by no means completes the list of publications put out by the Colleges of Agriculture and Home Economics.

Jim Estes, graphic arts designer, pointed out that each year thousands of pamphlets, leaflets, catalogues, promotional materials, and small magazines, including the *Cornell Countryman*, are produced and distributed by the Department of Communication Arts.

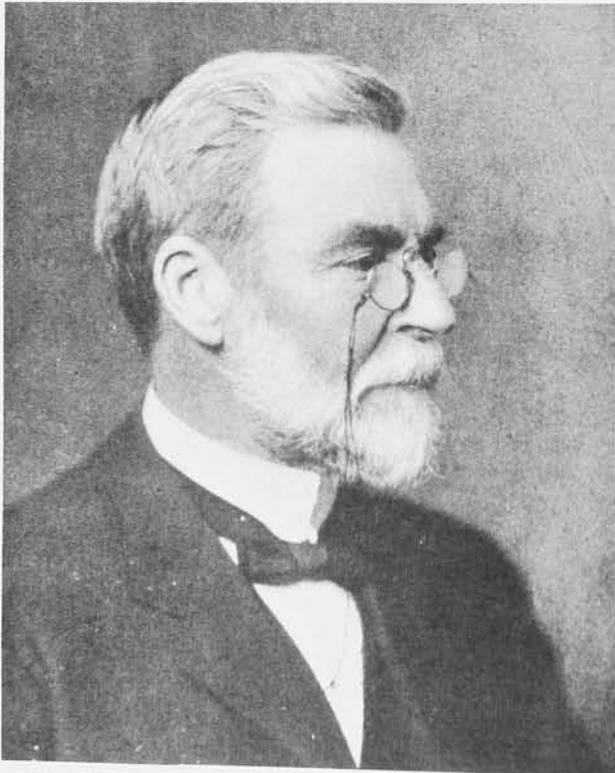
Perhaps the students on campus will always think of their Colleges as local institutions, but a brief glance at the world of publications produced by the Department of Communication Arts for the Colleges of Agriculture and Home Economics should prove to everyone that the work of these colleges extends far beyond the physical limits of their campuses.

AMERICA'S FIRST PROFESSOR OF VETERINARY MEDICINE

by MICHAEL BARCLAY '69

What can you say when a small boy with big, tear-filled eyes wants you to help his sick pet? Unless you are one, you will "take him to the vet."

Today, a veterinarian, like a doctor, is seen as a quiet and capable man who treats all types of animals and their ailments. However, in the last century this was not true. The majority of "veterinarians" had no formal education and were about as capable as witch doctors in treating sick animals. The man who brought about the trend toward education in the field of veterinary medicine was Dr. James Law, the first professor of veterinary medicine in America.



Dr. James Law

While in Europe in 1868, seeking supplies and personnel, especially the "horse-doctor" that Ezra Cornell wanted, Andrew D. White found Law, a highly accomplished and highly respected man in veterinary medicine. Law, educated in the great British and French institutes and a former professor at the Veterinary College of Edinburgh, accepted a professorship at Cornell and began instructing with the first freshman class. He was a dedicated teacher, deeply involved and satisfied with the Cornell community — almost, that is. Law had one burning desire, to see veterinary medicine realize its full importance, to see it grow from a department to a college.

Law strove to have veterinary medicine accepted as a necessity to the health and welfare of the public. For a few years, he even conferred degrees upon students completing satisfactory courses in veterinary medicine.

In 1893, Law made a speech in Albany about veterinary education. Here, he made his plea for veterinary medicine, stating that a man could become a licensed veterinarian too easily. Law said, "Their combination of drugs were as likely to develop poisonous chemical compounds as not, they confounded one disease with another, and blundered along with nostrums and placebos no matter what, so that 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."

It was at about this time that the public became aware that tuberculosis could be transmitted in infected milk. Governor Flower recommended that the state establish a College of Veterinary Medicine at Cornell and the state senate appropriated \$50,000 for its functioning.

One of Law's better students was Daniel E. Salmon. Graduating in 1872, Salmon received the degree of Doctor of Veterinary Medicine in 1876, the first such degree in America. He conducted a special study of swine diseases until 1879, when he joined the United States Department of Agriculture. For four years, he investigated

“... a dedicated teacher, deeply involved and satisfied with the Cornell community.”

diseases in domestic animals of the southern states, in particular, Texas fever.

In 1883, Salmon was asked to organize a veterinary division in the Bureau of Agriculture. One year later, this division became the Bureau of Animal Industry, which he headed until his retirement in December of 1905. His bureau's accomplishments are impressive, as the following shows:

- pleuro-pneumonia and Texas fever were brought under complete control.
- the causes and prevention of fowl cholera, contagious swine diseases and nodular diseases in sheep were studied.
- a nation-wide system of meat inspection was instituted.
- a quarantine system for imported livestock was established.
- inspection of cattle being exported and the ships exporting them was started.

And so were his personal achievements:

- authoring nearly one hundred articles, either alone



James Law Hall, 1896, the first veterinary building on campus. Present School of Industrial and Labor Relations stands on this site. Field in background is now the Ag quad.

or with others, covering the whole field of veterinary research of the period, while head of the Animal Industry Bureau.

– organizing a veterinary department at the University of Montevideo, Uruguay.

The first professor of veterinary medicine, a man with a dream, and the recipient of the first Doctor of Veterinary Medicine, a man with a mission, significantly changed the face of veterinary medicine from one of incompetent malice to one of dedicated service. With the assurance of competent training, a modern veterinarian can calm an anxious boy and heal a sick animal with ease and regularity.

View of campus showing Law Hall and Agriculture buildings (left). At right is an early observatory complex. Veterinary operating rooms are in the small buildings behind Law Hall. Early 1900's.



FROM CIVILIAN REPORTER TO MILITARY EDITOR

by **ROBERT E. FISTICK '68**

The eventful day was May 31, 1966, at Syracuse, New York.

On that somber, sad spring day I apprehensively raised my right hand and enlisted in the United States Air Force. And the new Beetle Bailey, really me, Cornellian Bob Fistic, ('64, '65 or '68, take your choice) stepped from civilian newspaper reporter to military editor in a series of fancy footwork maneuvers which sometimes involved "falling on my face."

At my duty station in Virginia, I had several nostalgic experiences of forgetting to don my garrison cap, and military men *always* wear their caps outdoors. On another occasion last summer, while walking down a sidewalk in front of Tactical Air Command headquarters, I prepared to salute a general, without having my belt on. He noticed.

But there are brighter sides to life in the Air Force. Shoes are one example. So are hat brims and belt buckles, if you remember to polish them.

However, my most rewarding Air Force experience has been as editor of the Langley Air Force Base newspaper named, as you might guess, the "FLYER."

Going from an exciting newspaper beat as police reporter for the Utica Daily Press in upstate New York to an Air Force base newspaper editor's post was quite a change for me.

The civilian and military aspects of journalism are quite different. But the responsibility to the audience, or the reader, is just as great in the military as in civilian life.

The military newspaper plays a very important role in the armed services, especially overseas. It serves not only as the voice for the post or base commander, but also functions as one of the primary lines of news communication.

I arrived at Langley in July of last year, after one month's basic training. Luckily for me, as if my fate had been cast by some unknown general, the "FLYERS's" editor was to be discharged soon. I spoke up about my previous experience and landed the job.

Soon after I accepted the editor's post, I found out why no one else had wanted it. Our paper was changing its printing process, from letterpress (used by most big, modern, American dailies) to web offset (used by the Ithaca Journal, also a modern American daily, but not so big).

Learning the editor's ropes as a novice airman was

difficult. With a major production change at the same time, the job was a real challenge.

Well, to make a technical story short, we totally revamped our old letterpress format, changing the look of the whole paper, and had a new product for the airmen at America's oldest active airbase.

The Air Force must have liked our work. Our first three offset issues were entered in the annual Air Force world-wide base newspaper contest last fall. To our surprise, as the base had never finished better than third, we were selected the first place winner of the largest circulation class in the competition.

I was honored to go to Washington to accept the first place Air Force award for our airmen. The plaque was presented by Gen. John P. McConnell, Air Force Chief of Staff, in his Pentagon suite.

Later that month, another four-star general, Gabriel P. Disosway, commander of Tactical Air Command, presented the Command's first place plaque and gave me a pen and pencil set for being selected the top editor in the Tactical Air Command for that year.

Since those brief and quite stimulating ceremonies this past spring, I was accepted in the Air Force "Operation Bootstrap" program and sent back to Cornell to complete one remaining semester for a bachelor's degree in communication arts. After graduation, I will go to navigator's school and serve as an Air Force officer.



Bob Fistic getting award from TAC Gen. G. P. Disosway. Col. H. G. Sanders, commander of Langley A. F. Base, holds "Newspaper of the Year" plaque won by "The Flyer."

COUNTRYMAN CAPSULES

Water, whether it's clean or dirty, is never wasted. It finds its way back for use and reuse by man in an endless cycle in nature.

While water is in such a perpetual circulation, many kinds of living organisms "hitchhike" in it. What happens to these microbes during the endless "ride" is a mystery.

To obtain some answers, Professor Norman C. Dondero, N.Y. State College of Agriculture, Cornell University, has recently initiated a three-year study of bacteria that are commonly found in sewage and in fresh water, polluted and unpolluted.

The project is backed by the Federal Water Pollution Control Administration of the Department of Interior, which awarded a \$22,000 research grant to Cornell.

The researchers are now trying to find out exactly what goes in and what comes out of municipal water treatment plants. They are cultivating and counting bacteria found in samples drawn from various stages of sewage treatment. At later stages, work will concentrate on samples to be taken seasonally from various water bodies to map the distribution of microorganisms at water surface, below the surface and in the mud layer.



Cornell University is undertaking a new approach to the study of education with the establishment of a new University Center for Research in Education and a new University Office of Teacher Preparation. The change also involves the discontinuation of the School of Education at Cornell.

"The purpose of the change is to bring all of the University's talents and resources to bear on educational problems, problems that are of vital concern not only to education itself, but to the nation and the world," President Perkins said.

"No one likes to see his own institution discontinued," Professor Mauritz Johnson, dean of the School of Education and chairman of the Department of Education in the College of Agriculture, said. "But if we are going to establish new organizational forms, we simply must discontinue some existing ones. If we are going to urge the schools to innovate and make radical changes, we at the University must be willing to do the same."

The new organization will preserve the existing independent departments of education at Cornell and will permit some expansion. Prof. Johnson summed up the changes in these words: "The reorganization of education at Cornell means that we are getting into the educational business more extensively than ever before."

Cornell University researchers have produced strong evidence that the chemical element selenium is vital for growth and survival of young chickens.

Selenium is an inorganic element long known to be extremely toxic when it is present in animal diets. Its role in animal nutrition has been the subject of much controversy among scientists in recent years.

The findings are an answer to the controversy over the basic question whether animals given substantial amounts of vitamin E have a requirement for selenium, J. N. Thompson, research associate in the poultry science department of the N.Y. State College of Agriculture at Cornell, said. Professor Milton L. Scott is the co-author of the paper.

An immediate task ahead is to determine the precise biochemical role of this chemical element, Thompson said.



Cornell University's dairy cattle judging team placed third in the National Intercollegiate Judging Contest held at Columbus, Ohio. More than 30 teams were represented in the competition.

Cornell team members, all students at the N.Y. State College of Agriculture, Cornell, were: Jack Cochrane, Delos Dann, James Patsos, and alternate, Edward Fielder. Dann tied for fourth place in individual scoring in judging all breeds.

In Kansas City, Missouri, two students from the N.Y. State College of Agriculture at Cornell were awarded the highest honor of the Future Farmers of America. The students, Richard Jones '70 and Thomas Gillette '68 received the awards at the national convention of the Future Farmers.

The awards are given on the basis of work for the FFA, scholarship, achievement and need. Both students are members of the Association of Teachers of Agriculture at Cornell.

PICTURE CREDITS

Cover and pages 8,9 - Tracy Atwood; page 3 - Cornell University Dept. of Housing and Dining; pages 4,5 - Courtesy Prof. W. Lambert Brittain; pages 6,11 - N.Y.S. College of Agriculture; page 10 - Anthony Ingraham, Cornell Outing Club; page 14 - U.S. Air Force.

Whose Business is Agribusiness?

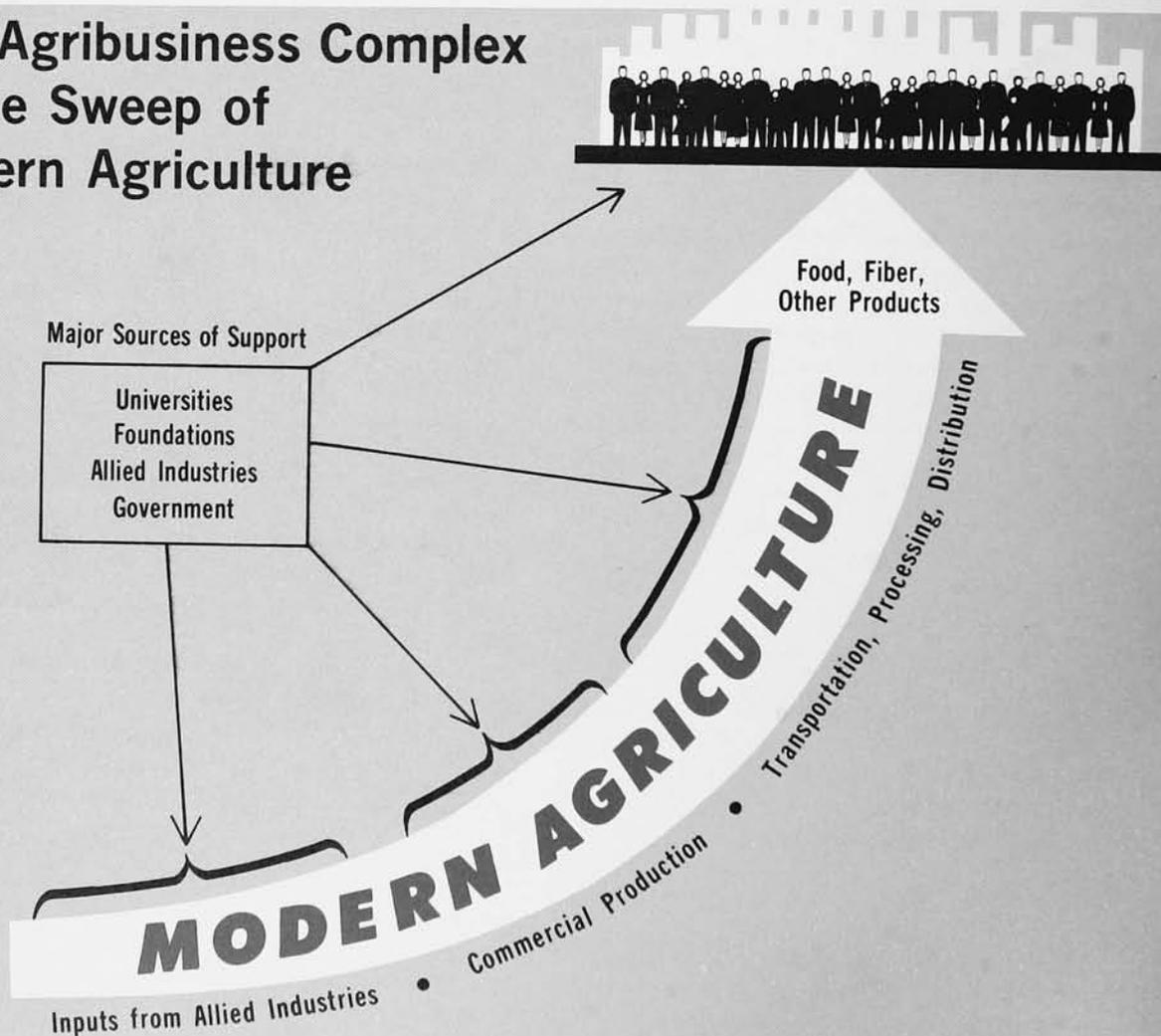
Everybody's!

Because a modern industrialized society must have a reliable source of food and fiber at reasonable prices, agriculture is a vital concern to us all.

New York's commercial farmers are the production specialists in agribusiness, supported by the input industries with seed, fertilizer, feed, credit, pesticides, and the like. Beyond the farm gate the food processing industries take high-quality raw food products through processing into convenience items for distribution and marketing throughout the Empire State. New Yorkers are among the best fed people in the world, with a food budget that comprises less than 20 percent of their income.

The continuous sweep of modern agriculture from planning for production through to the consumers of food and fiber involves hundreds of thousands of people in our state. Since farm production as a biological process is subject to variations in climate and other natural forces, it is impossible to meet production goals accurately. Consequently, at the top of the arrow in the graph, consumers are poised on a precarious balance which can tip because of too little or too much production. Americans have favored the latter, since it is safer to drag the full bag of plenty rather than the empty one of famine.

The Agribusiness Complex in the Sweep of Modern Agriculture



81c

CORNELL COUNTRYMAN

VOL. LXV

JANUARY, 1968

NO. 4

ALBERT
HACK
MAY 1971



ON THE COVER

Darkness and light – the new face of Cornell represented by Olin Library and a Lipchitz sculpture, "The Song of the Vowels."

IN THIS ISSUE:

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PICTURE CREDITS

Cover, pages 6 and 8 – Offices of Public Information; pages 3 and 7 – University Archives; pages 4 and 5 – Barrett Gallagher; page 14 – Campus Chest; page 15 – New York State College of Agriculture.

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Is This

Cornell University?

by SUSAN JONES '70

and NANCY KRUSE '70

If an 1869 graduate were to return to the campus, he might well question the reality of his location. "Is this Cornell University?" he would think as he stood in the middle of the Ag Quad. Most certainly it is Cornell, and just as certain are the changes that have taken place since 1869. The size and number of buildings on campus would certainly overwhelm him. He would know only Morrill, Cascadilla, McGraw, White, and Sibley Halls. Many buildings which are old to us, would startle our nineteenth century graduate. The idea of each academic department's having its own building seems extremely far-fetched however common such a plan might be today.

The first five buildings on campus hardly constituted a quadrangle when the University first opened its doors in 1865. The Cornell of our 1869 graduate was much more a unit. Separate fields of study were merely divisions of the whole and were not sub-divided as they are today. In 1968, there are 18 schools and colleges including graduate and undergraduate divisions. Most of these colleges have their own quadrangles. They seem to radiate from the center of campus like the spokes of a wheel. Aloof from the main campus is the New York State College of Veterinary Medicine. Even further removed from campus are the Schools of Medicine and Nursing located in New York City. Our 1869 graduate would certainly not have envisioned the huge, complex institution that Cornell University is today.

Ezra Cornell's purpose in founding the University was to "found an institution where any person can find instruction in any study." The founders did the best they could with the resources available, but Cornell's dream was far from a reality. There were only nineteen professors on the staff although this number was bolstered by visiting lecturers. Andrew D. White, the University's first president, served as a history professor. Fields of study included agriculture, mechanic arts, civil engineer-



Early commencement on the Arts Quad.

ing, chemistry, natural history, and the classics. The size of the student body is reflected by the average enrollment of 30 students in each of these areas. Today's enrollment of about 14,000 in the various divisions of the University is approximately 100 times the enrollment in 1868. And the areas open for exploration by Cornell students range from beekeeping to the study of foreign languages such as Urdu and Sanskrit.

The social life of Cornell has seen as many changes as the academic sector of the University. Cornell has always been co-educational, and the ratio (notoriously good or bad depending on which side of the fence you sit) has always been a matter of controversy. Although no women graduated in 1869, there have been female graduates in every class since then.

Cascadilla Hall served as the first University dormitory. Through the efforts of Andrew D. White, fraternities were formed to offer alternatives to dormitory living. In the early years of Cornell University, there were only six fraternities — Zeta Psi, Chi Phi, Alpha Delta Phi, Kappa Alpha, Phi Kappa Psi, and Delta Upsilon. By comparison, today there are over 50 fraternities and 11 sororities for those who want to "go Greek."

There were only nine students in Cornell University's first graduating class. According to an original commencement program, the exercises were held either in the building used as the library at that time, or on the quadrangle. Today, graduation exercises are held in Barton Hall with an audience of more than 8,000.

Every college or university must have its beginning on a small scale. Cornell has progressed; it has grown in size, in diversity, and in its contribution to the nation and the world. If an 1869 graduate were to return to campus today, he would marvel at the many changes. He might call it a place of change and he would be right, for this is Cornell.

From the Minstrels . . .

by JOE KELLEY '69

Bet you never thought there could be a dramatic organization in the Ag School!

Well, there was one, called Kermis, for over 25 years. Inspired by the enthusiasm of those in the Department of Rural Sociology, it was formed before 1920 to entertain people from all over the state during Farm and Home Week. Held once a year, Farm and Home Week presented new discoveries in farming technique, and also entertainment. Kermis used its funds to sponsor play-writing contests for plays with rural settings. When the tradition of Farm and Home Week faded away, Kermis, deprived of its central activity, faded away too.

Dramatics was present at Cornell a long time before Kermis was born, however. As early as 1870, a troupe, composed mostly of students, produced a play. Two years later, a group called the Cornellian Minstrels put on a show to aid the Cornell Navy. And the amorphous, rather disorganized quality of dramatics at Cornell was still present in 1878, when a group of faculty and students assembled to give what were called "unpretentious farces."

In 1880, a serious drama club was organized, the Cascadilla Dramatic Organization. Through the financial support of Goldwin Smith, it acquired a "theater" in Cascadilla Place (now Cascadilla Hall), where the group put on "She Stoops to Conquer."

In 1890, a new dramatics group, The Masque, was formed. Its first play, written by an undergrad, was "Instructor Pratt," given in Wilgus Opera House (now the upstairs of Rothschild's). In 1901, The Masque included four coeds in its production of "The Taming of the Shrew." Three years later it gave its first comic opera, "Anno 1992," which was very well received.

Because of the popularity of "Anno," The Masque continued to give transvestite comic operas until about 1922 when the popularity of the group began to diminish rapidly. The Masque members foresaw a dim future as early as 1915 when the club reduced its prices and offered

prizes for original undergraduate plays in an effort to revitalize itself. But competition from other dramatic groups was too keen. The Masque gave its last production (ironically, "Lady Luck") in 1926. Its death, however, was not an ignoble one, for the group left about \$5,500 to the University for the encouragement of student dramatics.

Perhaps the first women's dramatic organization at Cornell was the Sage Dramatic Club, formed in 1897. Later, the Cornell Women's Drama Club was created.



to the Mikado

Its first public appearance was "Quality Street" in the Lyceum in 1916.

In 1909, Ibsen's "An Enemy of the People" was produced, largely through the preparation of Smiley Blanton, an instructor in oratory. Soon after this successful production, James A. Winans, head of the oratory department, and Blanton, together with some of the students in that department, organized the Cornell Dramatic Club (CDC). The objective of the club was "the serious study of drama and the production of good plays," particularly

plays by European authors whose works were produced rarely or not at all by professionals. The CDC then put on annual full-length plays at the Lyceum, including the works of Ibsen, Gogol, Giacosa, Pinero, and Henry Arthur Jones.

Alexander M. Drummond of the public speaking department took over direction of the CDC in 1912, and in that capacity directed almost every major production until 1926. His great ability in production, playwriting, and training student actors contributed immeasurably to the success of the club, and to his fame outside Cornell. In 1917, he supervised the transformation of Goldwin Smith B into the Campus Theatre. Before this, performances had been given in Sibley Dome and Barnes Hall. The Campus Theatre was used primarily for one-act plays, which were given two or three in an evening.

In 1925, the Cornell Women's Drama Club combined with the CDC, and in the same year the new University Theatre in the Straight opened with Tyler's "The Contrast," the first social comedy written and produced in America. (Other firsts: the 1915 production of Giacosa's "Like Falling Leaves" was the first American rendition of that play; "The Adventurer," by Capus, staged in 1916, had never been performed in an English-speaking country; the 1927 performance of Pirandello's "Right You Are" was the first in America; and the CDC was one of the first organizations at Cornell that did not discriminate against coeds.)

One of the larger productions in CDC history was Gilbert and Sullivan's "Mikado" in 1934. Performed in Bailey Hall, the musical was a joint production of a chorus of 64, the music department, the glee clubs, and the instrumental clubs. Later, "H.M.S. Pinafore" and "Princess Ida" were also presented as joint productions.

An article in a 1916 issue of the Sun declared: "From a small and apparently insignificant organization a few years ago, the CDC has so developed that Cornell can gladly claim it as one of her institutions." And it is amazing, indeed, how this club has grown in size and renown. Morris Bishop, in *A History of Cornell*, gives this estimate of the size of the CDC, which even now is somewhat antiquated: "In an average year, 400 students helped in staging 12 full-length plays and as many one-act plays before a total audience of 15,000."

Today there are fewer full-scale productions, but the audiences are much larger. Probably the most remarkable aspect of the CDC is that it has been consistently excellent throughout its 58 years. Prof. Walter H. Stainton, Emeritus, who worked very closely with the CDC during the years after Prof. Drummond, put it this way: "There is probably not another club in the United States that has lasted this long and has made so many productions of good plays."

The 1934 production of "The Mikado."



HOCKEY . . .

Rough Road to Smooth Ice

by GREGORY POGSON '69

Cornell skated its first hockey team in 1900. That year, coached by G. A. Smith, we won all three of our scheduled games. Last year, under Ned Harkness, the eighth Cornell hockey coach, the Cornell team became National Hockey Champions. Unfortunately, the intervening years did not see nearly the same degree of success these two teams had.

Cornell's early hockey teams had many problems. The 1902-03 team was ordered by the University to disband when it was discovered that one of the players on the team had already "busted out." It seems the management was so enthusiastic about winning they somehow overlooked the fact that one of their star players was ineligible.

In 1905, the faculty gave permission for a team to be reorganized, only to disband it again on the grounds that the team had gone to Rochester to play a game without faculty consent. Finally, in 1907, a hockey team was founded that had solid student and faculty support, along with an elaborate plan of action for the coming year. Unfortunately, the weather was unkind; the winter was too mild to allow much skating, let alone any games.

After many trials and tribulations, hockey finally got started at Cornell with the 1908-09 team. During this year and the next, Cornell participated in many intercollegiate games, some with our Ivy League rivals but most with upstate teams — Clarkson, Colgate, Hamilton, and Syracuse. In 1910-11, the team, coached by Talbot Hunter, had a truly championship year — it won all ten of its matches. Cornell was acclaimed Intercollegiate League Champion. After this year, partly as a result of increasingly degenerate weather conditions, Cornell reverted to its days of losing more than winning. This downhill trend continued until 1916 when hockey was discontinued because of World War I.

In 1921, when hockey was resumed, the coach was Nick Bawlf. His first year as coach was one of his best; the team won four, lost one. Though he was one of Canada's greatest athletes, he rarely won more games than he lost in all of his 26 years of coaching Cornell hockey. This was partially due to a lack of facilities and finances for the team. In fact, the entire 1936-37 season consisted of two games at a Christmas tournament in Rye, New York. Following the 1947-48 season, a year after Bawlf left as coach, the Cornell athletic department decided to discontinue the sport until an indoor rink was available.

It was a while in coming, but in 1957, \$500,000 was donated to Cornell for the purpose of building an ice skating rink. It was to be called the Lynah Skating Rink, in memory of the late James Lynah, former Cornell athlete and athletic director.

From 1957 to 1963, Cornell hockey experienced its rebirth under the leadership of Paul Patten, a former St. Lawrence University coach. His success in building a strong team was apparent when Ned Harkness became coach, starting in the 1964-65 season. In Harkness' second season as coach, Cornell won the Ivy League title and was runner-up to Clarkson for the eastern championship. In the next year, 1966-67, Harkness led the team not only to the eastern division championship, but to the National Championship as well. After many arduous years, Cornell has finally made it back to the top. We are Number 1.

The prospects for the 1967-68 season are good, even though more than half of last year's team is gone. According to Ned Harkness, "Any team that beats this Cornell ball club is going to have to really play hockey and skate hard."

Cornell skaters in some fast ice action.



A House Is Not A Home

by JERRY TRUB '70

Acacia, Alpha Chi Rho, Alpha Chi Sigma . . . Zeta Beta Tau, Zeta Psi — these names represent the fraternity system spawned by the vision of President Andrew D. White. Once unchallenged, the status of fraternities in the eyes of the faculty and administration as well as the students has experienced a steady downfall.

While a student at Hobart College, Andrew D. White developed an intense antipathy toward the impersonality of large dormitories. As a result, he aided and encouraged the growth of small living units to which the student could feel a sense of belonging.

By 1910, over 50 fraternities (mostly with national affiliation) had answered White's invitation. During that era of the "un-intellectual" Cornellian, fraternities were the center if not the source of all campus social life, and they exerted tremendous power.

The turning point came in the immediate post-World War II years. Returning veterans discarded many of the nonsensical and immature attitudes that characterized fraternities during the 20's and 30's.

Another major jolt has been the mounting faculty opposition to the alleged ethnic discrimination in membership selection and the anti-intellectual atmosphere of most houses. This culminated in the Faculty Committee on Student Affairs report in 1966 urging the University to disengage itself from the fraternity system. Why has this assault against a former Cornell "sacred cow" grown to pose a major threat to the future of fraternities?

The answer to this question lies in the history of intergroup relations in the United States. By and large, the years before the early fifties were marked by unconcern. The Negro "knew his place," the Jew knew "his limit," and conditions were stable. Fraternities were not any more discriminatory than was the nation at this time.

Houses were often formed on the basis of ethnic or racial lines, hence the familiar terms "white house" and



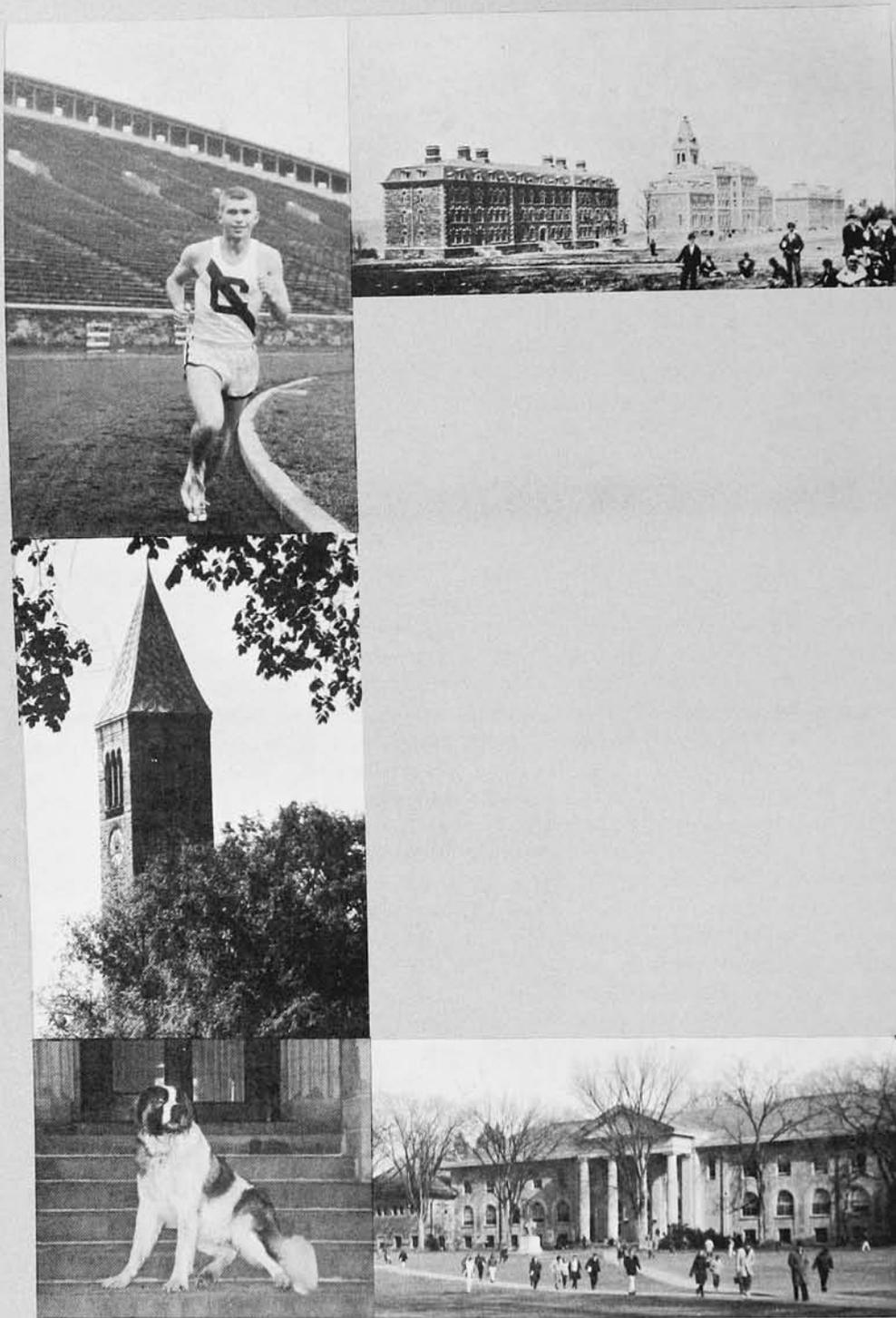
"Jewish house." One chapter was exclusively Italian. The few Negroes who came to Cornell were unwelcome in any fraternity.

"Jewish" and "white" houses lived together by a gentleman's agreement — Goldberg to Sigma Alpha Mu, Anderson to Sigma Chi. Of course, not all houses were segregated, but these tended to be at the bottom of the totem pole of reputation.

Following the 1954 Supreme Court decision to ban racial segregation in the schools, America, particularly the intellectuals, joined the civil rights crusade. Slowly but surely, houses were pressured from within as well as without to alter their attitudes. By the 1960's, only a handful of houses refused to yield, generally because of influence from their national organizations. Though ethnic polarization exists, it has been greatly reduced, and every house has made at least a token effort.

Today, the more serious problem, though a less spectacular one, has been the anti-academic attitudes presented by the fraternities. Since fraternities exist to provide a social life for their members, academics assumes a less important role. Consistently, the average of freshmen who join fraternities is below that of their independent counterparts. Pledge programs have increased in maturity by admirable proportions. Nevertheless, they give pitiful consideration to the fact that pledges are students and are here primarily for an education. Until recently, anyone on academic probation was prohibited from pledging. Ever wary of their reputation, houses and individual brothers try to appear as social as they can.

Fraternities, at Cornell and throughout the nation, are on the defensive. Most campus leaders, faculty as well as students, agree that the system is on the way out. The proposed new dormitories will be one significant blow, and the attractiveness of independent life will grow at the expense of the fraternity system.



From top, counter-clockwise: The Arts Quad, 1870; Cornell runner at Schoellkopf Field; Library Tower; one of Cornell's mascots; Goldwin Smith Hall.



From top left: Baker Laboratory of Chemistry; Football game, circa 1920; Statue of Andrew D. White, Cornell's first president; an international student.

Politics and Protest —

Past and Present

by TAMAR ASEDO '69

Political involvement at Cornell is nothing new. Cornellians have always been actively interested in current affairs.

The Cornell community's reactions to two World Wars and to the Vietnam War, burgeoning absurdly before our eyes, are somewhat comparable. In all three cases, Cornellians did not want the United States to go to war. They did what they could to aid the countries at war, but they did not see the necessity of sending American soldiers. Before the United States' entrance into World War I, Cornellians raised \$2500 for the Belgian Relief Fund. Cornell, incidentally, was the last major eastern university to do so. Before the United States' entrance into World War II, money was raised to send a Cornell ambulance to England for war relief. Last year, Cornel-

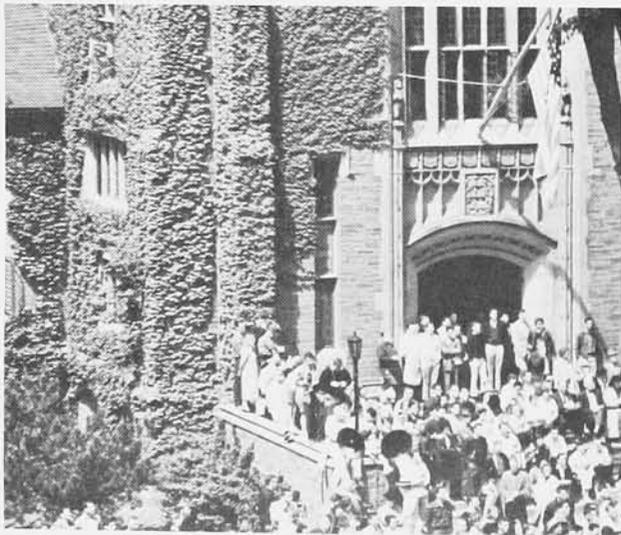
lians collected money for medical supplies for both North and South Vietnam.

Once the United States had officially entered World War I, Cornellians were anxious to do all they could to help their country. On the day war was declared, 250 men left school to join the Mosquito fleet (branch of the armed services), and 169 men signed a statement of intent to enlist upon graduation. This is in direct opposition to the statements in current circulation of refusal to serve in the armed forces when called.

During World War I, Cornell was reorganized into several schools for training soldiers. Men were divided into age groups rather than classes, and fraternity houses and dormitories were used as barracks. The curriculum was prescribed by the Committee on Education in Washington, and a student's course was designed according to the branch of service for which he was being trained. The two courses common to all were military instruction and the causes and issues of war. More than 200 men attended voluntary drills held by the Department of Military Science. By the end of the war, more than 5000 Cornell men were in the service.

In October of 1939, a poll was taken concerning United States involvement in the European conflict. Students were decisively opposed to going to war unless the United States was directly attacked. Fifty-eight per cent would not fight to protect another country in the western hemisphere, and fifty-nine per cent thought the defeat of Germany would not stop the spread of totalitarianism. Cornellians were called "sissies" by the Chief Justice of the Idaho Supreme Court for not wanting to fight.

Students rally at Willard Straight Hall.



All this is strikingly similar to our current situation. Many Cornellians do not want to fight; they are more concerned with the welfare of the United States than with that of a foreign country. They have been called worse names than "sissy" by fellow students as well as by townspeople.

In May of 1941, the University set up a Committee on Student Counseling for National Defense to advise students on military service. When the United States entered the war, many students wanted to leave school immediately to join the service but were advised against it. Cornell President Day said they could better fulfill the needs of American society by completing the course of study in which they were enrolled.

Our current Student Draft Counseling Service has a different purpose: to advise students on the best way to avoid the draft. No one wants to leave school now to fight, but the threat of the draft is omni-present.

On December 4, 1941, three days before the bombing of Pearl Harbor, the official statement from Cornell was: "Send the planes but not the men." Two days later Cornell sent nine members of the International Relations Club to a conclave of the Council of Model League of Nations to discuss American foreign policy. The International Relations Club, similar to our current Students for a Constructive Foreign Policy, also offered a course following the work of the Commission to Study the Organization of Peace. Its purpose was to educate public opinion towards plans for a lasting peace.

The United States' entrance into World War II was greeted with enthusiasm, "evidence of the highest type of spontaneous, unsolicited morale . . . which can only appear in a democratic country," according to the editor of the Cornell Daily Sun in December 1941.

By March of 1942, student morale had deteriorated considerably. Ninety-two per cent of the Cornellians thought that victory in the war was absolutely essential, yet almost a third of the students were doing nothing directly related to the war effort. Forty-six per cent were willing to do what they could but preferred to wait until called upon.

Cornell sponsored programs to give every student the opportunity to participate in America's war effort. Mass calisthenics were organized, all regular and supplementary courses related to the war effort were listed, and weekly faculty interpretations of current war action were held.

Cornell coeds have always tried to do their share as well. Aside from actively campaigning for women's suffrage during the World War I period, they held a flag sale and tea dance to earn money for France and assisted the YWCA of Ithaca to solicit for the War Friendship Fund. Sororities adopted war orphans.

During World War II, 48 per cent of the coeds participated in a program sponsored by Cornell United Religious Work to knit scarves, sweaters, and mittens to send to Europe. Thirty-six per cent of the women enrolled in first aid, home nursing, and nurse's aide courses in cooperation with the war effort.

Last year a women's "We Won't Go" group was organized to give moral support and encouragement to the men refusing to be drafted for the war in Vietnam, and had a substantial following. Among other projects was a cake sale to raise funds for the Spring Mobilization to End the War in Vietnam.

Political activity at Cornell has not substantially changed over the years. The causes may differ but the students' interest and involvement remain the same.



Cornell Reflections

Freshman

*Oh, I am a freshman who stands way up here.
I was nursed by my mother, but now I drink beer.
I miss my old bottle, it's sad for to tell,
For soon I'll be busted right out of Cornell.*

Cornell is confusing. Its size and diversity give it a range of opportunities and possibilities which is amazing, yet disconcerting to the freshman. How is he going to use all the resources available to his best advantage? This problem is foremost to many freshmen.

Impersonality appears to be the basic attitude toward the freshman. He discovers for himself that the isolation is to be self-imposed. With a little effort, he finds that professors are willing to talk to him as an individual, not just as a member of a class. The faculty advisors do their best to reduce the impersonality of Cornell and to make the freshman feel an integral part of the school.

The College of Agriculture provides a small haven from the overall turmoil of the University. On the Upper Campus, slightly removed from the more populous sections of the University, the Aggies have a feeling of unity, often aided by the remarks of students in other colleges. The Ag School provides a base to explore the numerous opportunities offered at Cornell University.

The Cornell campus, in appearance, is the only part of Cornell that is exactly as expected, with the obvious exception of the steepness of Libe Slope. Cornell's location and buildings fulfill almost every aspect of an idealized university campus, from modern new additions to the old, heritage-laden, ivy-covered walls sedately placed about the grass covered quads. The other occupants of the quads, the students, provide the atmosphere of the University, which is centered on diversity. This diversity is the focus for much of Cornell's attraction. The opportunity to meet, talk, and argue with people of different backgrounds and beliefs than one's own is one of the major experiences to be had at Cornell.

Into this confusion, facing these possibilities, comes the freshman, not yet sure of his role in the University, but proud to be a part of Cornell.

Jon Pennino '71

Sophomore

*Oh, I am a sophomore with debonair look.
My vile freshman manners I long have forsook.
I date only girls from Elmira and Wells,
For in my opinion, they all beat Cornell's.*

As the sophomore returns to Cornell, he enters a different sort of world from the world he left in the spring of his freshman year. Many of the students are in fraternities and sororities. All the students have some idea of what to expect from the University. Most sophomores are no longer intimidated by the idea of coming to a school the size of Cornell; they can get beneath the veneer of the reputation to know the merits and the disadvantages of the real University.

The stability of the sophomore year rests on familiarity with the opportunities for extracurricular activities and experience in the way to get the most from one's courses. The novelty of following a course of study more closely related to the individual student's interests in contrast to the round of required courses in the freshman year is exciting.

It is during this year that the student can make the most of the University by making more friends within his own College as well as realizing the unlimited opportunities of a university. This gives Cornell the advantages of a small college and a big university combined.

The first-term sophomore is not committed to a major, but his work is directed towards fewer subjects, making a nice balance between specialization and generalization. He can test himself in this situation to see if he is really pursuing the proper course of study.

The sophomore is fully aware of what Cornell can offer and is beginning to take advantage of the many opportunities. The sophomore is confident of his place in the University, whereas the freshman may be hesitant. It is the start of a time of transition between the first year of adjustment and the senior year fulfillment of goal.

Claudia Kramer '70

Junior

*Oh, I am a junior, a-smoking my pipe.
My mood mellows out over lager and tripe.
I know all the bars and the barmaids as well,
For I've not been a-wasting my time at Cornell.*

Cornell is many faceted. It is made up of students of all social classes, nationalities, interests, physical appearances, ambitions, and personalities. It offers a multitude of activities. As a freshman, I was overwhelmed at the varieties of living I had the opportunity to be exposed to. I came in contact with people whose backgrounds I had never known could exist. I participated in activities; I went to parties. I saw how much I had been restricted before I came here and how much more I had to see and do while I was still here.

And yet, I see that there is something vitally wrong with Cornell. Many people call it a "lack of school spirit" – a "coldness." But what is the cause of this? I think it stems from a basic social pressure that the students impose upon themselves.

Everything is classified in either of two ways: "in" or "out." I think that fraternities, as the basic social unit at Cornell, are largely responsible for this pressure. Anything not related to fraternities is "out." Therefore, school spirit (uniting the whole campus) is "out." Even at football games there is block seating. Football rallies are "out," concerts of classical music are "out," even singing the Alma Mater is "out." One must do what is *cool*.

I think here lies the reason so many people complain about how hard it is to meet anybody (especially of the opposite sex) – there are practically no activities that are considered "in" where you could find a prospective date.

Cornell's motto is "freedom with responsibility" and every day we clamor for more and more freedom from the University to do what we want, and yet, ironically, we are making ourselves slaves to our own code of restrictions. We are giving ourselves less freedom than the administration could ever hope to impose.

Cornell is many faceted. It is beautifully varied. But in order to achieve a real freedom and a contentment with the school, we must allow each of these facets and variations to flourish on its own merits without being labeled "in" or "out," "cool" or "turkey."

Ellen Grossman '69

Senior

*Oh, I am a senior a-taking my ease.
I cut recitations whenever I please.
I go to the concert and cut quite a swell,
For soon I'll be leaving this school of Cornell.*

– Traditional lyrics

When I came to Cornell four years ago, I had a lot of assurance. I knew what I wanted from life, and I knew how to get it. Things are slightly different now. Cornell is a place of testing new ideas and revamping old ones.

For some people, this reshaping of values is an almost impossible job, but the student who comes to Cornell must question his value system. The campus is alive with challenges to his beliefs and it is not possible to avoid them.

Cornell is much more than a prelim on November sixth. You can't pin it down to any one set of events. Cornell is walking across the quad at four-thirty on a winter afternoon and having the wind whistle right through you. Cornell is the traffic jam of cars on route 96 returning after an all-too-short Thanksgiving vacation. Every vacation from Cornell seems too short, but there is also an undeniable anxiety to get back to the grind.

The University is a place where each individual can find his own groove. The freshman is tossed into the massive student body of 14,000; when he returns as a sophomore, it is with the ability to move easily within the vast framework of the school. The junior is thoroughly at ease and has temporarily found himself. But the senior is on the brink of the world. The four years have gone too quickly. The vacations weren't there. There couldn't have been eight semesters.

But that's Cornell, four very short years in one's life. If in that time, I've learned about people, about myself, about living, then those four years haven't been wasted. Cornell is more than "booking it at the Libe," or "boozing it at the house."

Five years from now, if I come back for a class reunion, I'm sure that I'll be quite nostalgic about the University. But that won't be what Cornell really is. Cornell is now – it's having to run to my next class because it's too cold to walk. Four years of frozen ears is about enough for anyone, but I must say, they've been nice years.

Brooke Breslow '68

Let us now praise . . .

The Campus Chest

by CHARLES G. WILSON '69

The Cornell Campus Chest is both operated and supported by Cornell students. The primary activity of this group is their annual fund-raising drive which is held each fall. Other funds are obtained through various concerts throughout the year. All the money collected by this organization will benefit either Cornell students or student projects. Funds go into one of five different specific funds.

The Cornell Student Emergency Fund provides students in financial emergencies with immediate funds. This fund is supported solely by money from the Campus Chest. Many students have taken advantage of this fund in past years in order to get financial assistance as quickly as possible. Jon T. Anderson, director of the Office of Scholarships and Financial Aid and administrator of this Fund, gives this example of its use. "A Cornell graduate student from the Far East had completed all the requirements for his Ph.D. but had insufficient funds to return to his country. A grant from the Emergency Fund was made to provide this, and he has since repaid more than half the amount he received."

The Cornell Off-Campus Projects of Social Responsibility is the second recipient of Campus Chest funds. This year's drive will help support projects in Honduras, East Harlem, and Brazil. These are projects that Cornell students take part in during the summer. The Emergency Fund and the various student projects receive one-half of the Campus Chest funds. The remaining 50 per cent goes to three separate programs.

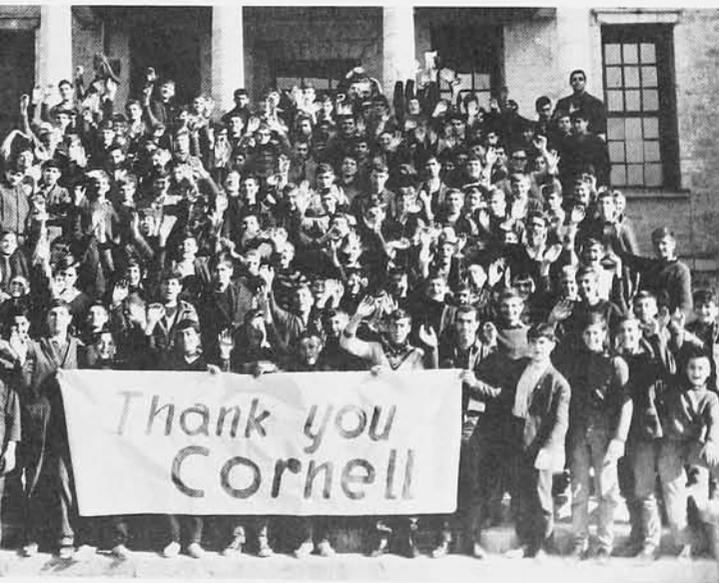
The first of these is the American Farm School near Thessalonica, Greece. This school provides 200 rural boys with a four-year agricultural and technical education. It also teaches boys how to demonstrate their modern skills to the people of their villages. Cornell contributions from the past have built the "Cornell Center" and have put two boys through the school. The director of the school and several of the staff are former Cornellians. The school also has special short programs in which thousands of adults have taken part.

For several years the Campus Chest has aided the Andes Haumanga University, a unique center of learning in the mountains of Peru. The University provides a higher education for any qualified student, in a country where many Indian children usually get little education. Cornellians have helped build a dormitory and provided scholarship aid for the University.

The National Scholarship Service and Fund for Negro Students also receives aid from the Campus Chest. This is a counseling service for Negro students who are applying to interracial colleges. It grants financial aid only if the student has no funds from other sources. Almost everyone they have sponsored who applied to Cornell was accepted.

This is the Cornell Campus Chest, working to aid needy students at Cornell and all over the world. Students in Harlem, Honduras, Greece, Nova Scotia, Africa, and many more places are benefiting from the hard work of the Cornell students who are a part of this most worthwhile organization.

Students at the American Farm School, Greece, show their appreciation.



New Tower on Tower Road

by RICHARD MARKHAM '68

Work on the Agronomy Building began in June, 1965. The nearly windowless structure, barring any unforeseen delay, will be ready for occupancy by the beginning of the Fall '68 term.

The Agronomy Building will accommodate the entire Department of Agronomy including field crops, soils, meteorology, and aquatic plant study; the breeding division of the Department of Plant Breeding; and the genetics and physiology divisions of the Department of Biological Sciences.

The 13 story research tower's primary function is to accommodate the research and teaching programs of the three departments. The first floor with four classrooms and a teaching laboratory will be used entirely for teaching. The remaining floors are devoted primarily to research. Each floor is organized around a central corridor with an interior window bay and faculty lounge at the end of each corridor. The low wing accommodates additional teaching laboratories, multi-purpose labs, and administrative units.

Representing a new architecture for the research laboratory, the building is interesting in several aspects. For one, the air conditioning system is closely integrated into the design of the tower. In the completely air-conditioned building, two hemispherical shafts at the north and south ends serve to channel only outside air drawn in at the ground level of the building throughout the entire tower. Contaminated air is discharged skyward by four massive periscope-like shafts, two on each side of the building, thus preventing cross-contamination of the air supply.

The air conditioning system is part of the vertical concept of the building. Not only the air conditioning system, but the stair towers and chases for plumbing and electrical risers are incorporated into the vertical appearance of the building. The chases are the rather flat buttresses on the east and west sides of the tower. The two large shafts at the north and south ends of the building are the stair towers. In other words, the main functional units of the building are an integral part of the composition rather than conventionally hidden within the structure.

One of the most striking things about the Agronomy Building is that it has no windows except for the eleventh floor meteorology section. The meteorologists wanted to see what the weather was like.

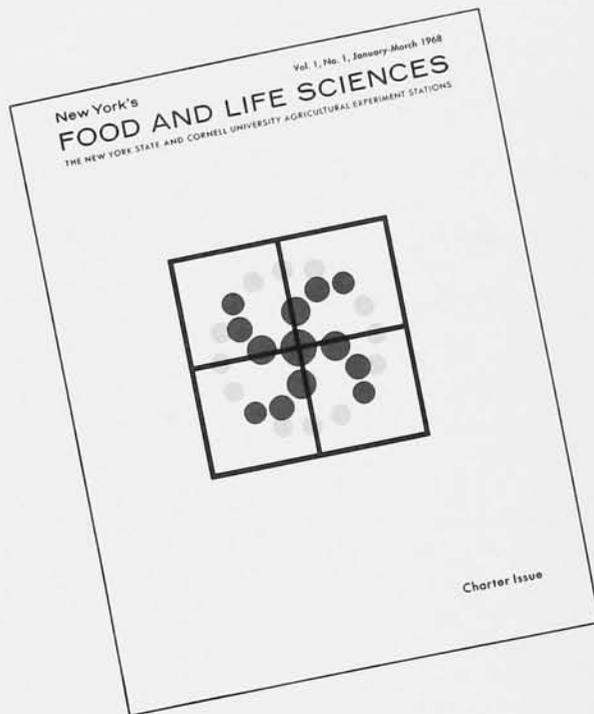
At first, the building committee was critical of the lack of windows, so a number of its members went to see the windowless medical research center at Johns Hopkins University. They came away convinced. The absence of windows allows for a completely controlled environment for research, and for air conditioning at extremely low cost.

The meteorological division has teletype facilities and weather instruments on the roof. There are facilities for x-ray, radio-isotope, and organoleptic research. There is also an electron microscope and x-ray diffraction facilities which were not previously available to the Department of Agronomy.

When the Department of Agronomy moves into the new building, another department will move into Caldwell Hall. The Agronomy Building is financed by the State of New York, the National Science Foundation, and the National Institute of Health. When completed, it will be yet another of the fine facilities available for research on the Cornell campus.



Announcing A New Research Magazine



Reflecting the significant scope of research in today's modern, dynamic agriculture, a new quarterly, "New York's Food and Life Sciences," will be born this month. (It replaces "Farm Research," a quarterly published continuously since 1934.)

In addition to describing research projects of interest to farm-oriented readers, this publication will also contain accounts of basic research, discoveries in man's social

environment, and the results of problem-solving efforts.

Like the exciting, ever-changing agribusiness community it serves, "New York's Food and Life Sciences" will present current information from the New York State Agricultural Experiment Station at Geneva and the Cornell University Agricultural Experiment Station in a semi-popular form for the reader's self-enrichment, scientific application, and commercial adaptation.

file

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ON THE COVER

Students take a tumble while tray sliding down Libe Slope.

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MORE FOOD: THE NEED IN INDIA

by ARTHUR J. DOMMEN '55

(Editor's Note: Mr. Dommen wrote this special article for the Cornell Countryman at the request of Professor William B. Ward who was in India recently. Art, a former student of his, is now foreign correspondent for the Los Angeles Times.)

Food is by far the biggest news story in India today. Unless China attacks India again, the Indian government has no challenge in foreign relations that is nearly as urgent as raising the productivity of the Indian farmer so the country can feed itself and survive in a world where food surpluses are dwindling.

The Indian farmer's methods may be simple, but the types of farming are so diverse that attempting to form an accurate picture from New Delhi would be hopeless. Getting the accurate picture is the real challenge of being a journalist in India.

Because each of India's 17 states has different problems of food production, I soon discovered that I had to go out to the states in order to find out what was what. Officials in New Delhi talk about surplus states and deficit states, but these descriptions gloss over countless variations.

The state governments in India have far more power in determining the development of agriculture than do state governments in the United States, and the second most important man in the state government is likely to be the food minister. State governments in India control levies on each crop and ceiling prices for agricultural products. The state governments have a lot of statistics about what is happening in their states, but to get details one has to go to the district offices and the block development offices. Here, things like the increased use of fertilizer, the silting-up of an irrigation reservoir, the shift of rice land into sugarcane growing, or the number of wells that should have been drilled years ago but never were become comprehensible, and one can write about them for readers in the United States.

There are many surprises coming out of this challenge to India's survival as a food-growing nation. Plant breeders have found that many new seeds that had proved so productive in test plots do not stand up under the harsh Indian conditions. Indian varieties, with changed farming practices, sometimes prove superior. We are learning from our aid effort, as well as teaching through it. A piece of farm equipment made from local materials

and based on a local design is frequently more valuable than an imported tractor or plow. The exchange of ideas between Americans and Indians is part of the broad subject of reporting India to Americans.

After one year of reporting in India, I have come to view with suspicion stories of "miracle seeds" and other cure-alls for India's food problem, to doubt that the Indian farmer is lazy and inefficient, and to respect him for the job he is doing under difficult conditions and with few incentives for higher productivity. I must also doublecheck all statistics I see about agricultural production, prices, and investment. Once I was nearly taken in by a set of production figures assembled to prove that a particular program had been very successful in increasing output, until I checked and found that the method of calculating the actual output was changed by district officials halfway through the test period. This can happen all too frequently in a country where farmers keep no records, and where the government likes to pretend it is omniscient and omnipotent when it comes to planning farm production.

I am inclined to be optimistic, to believe India can solve its food problem. Even with the population explosion, I think it can be done — but not in the near future. It is going to be a long haul.



A feminine farmer in India harvests her crop with oxen.

Far above Cayuga —

The Water Resources Center

by MARYA DALRYMPLE '70

Did you ever realize that New York State is situated on a giant peninsula, surrounded by the Great Lakes, the Saint Lawrence River, and the Atlantic? "In addition," states Leonard B. Dworsky, director of the Water Resources Center at Cornell, "New York is a head water state containing within its boundaries the origins of the Delaware, Susquehanna, Hudson, and Ohio Rivers and many streams that feed the Great Lakes."

One of the aims of the Water Resources Center is to make the results of research on these waters available to the public in an effort to arouse people's interest in the water resources which surround them. Located in Hol-

lister Hall, the Center is Cornell's way of approaching a problem area which is not specifically the focus of any of the departments or colleges.

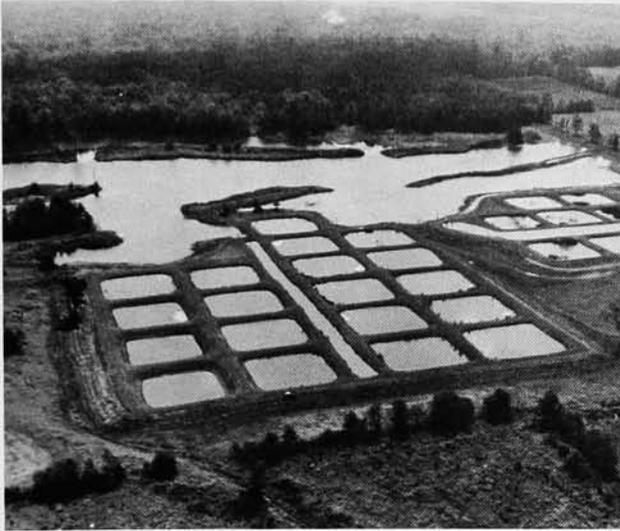
The director of the Center, Dworsky, was appointed in 1964 after being associated with the Federal Government's water pollution control program for many years. He is presently on leave from Cornell to the Office of Science and Technology in Washington, D.C., as President Johnson's scientific advisor on water resources. Associate director of the Center, David J. Allee of the Department of Agricultural Economics, became interested in water resources after doing his Ph. D. thesis on irrigation in New York State. He is responsible for water research programs in the state-supported units at Cornell. Beyond a director and his aides, the real staff of the Center consists of the 80 faculty members in different departments on campus who are involved in water resources research.

When Americans are thirsty, we merely turn on the tap and enjoy a refreshing glass of cold water. When we are grimy, water is always available for washing away the dirt. It is not surprising that water is taken for granted. Few people realize what an integral part water plays in their lives until a drought occurs and water is scarce or pollution destroys their favorite swimming spot.

"We here at the Center are involved in many areas of water research," states Allee. "One of our primary studies involves patterns of water availability relative to time and space. In the fall, after a dry summer, we find a need for water, whereas in the spring there may be floods." The problem of water availability is especially important to the farmer in deciding upon an irrigation plan. He must take into account the probability of



Shown here is weed growth at the lower end of Cayuga Lake. The light areas represent places of most abundant growth.



These specially designed ponds near the Ithaca airport are used by the Center to research weed control and fish survival.

drought (absence of water when you want it) or rain, and know how to combat them. Faculty associated with the Water Resources Center investigates and notes the farmer's problems and makes data available to him through the Cooperative Extension Service.

Another important area of study for Cornell scientists, one important to urbanites as well as farmers, is pollution control. Recently, the Colleges of Agriculture and Engineering jointly appointed Professor Raymond Loehr, formerly of the University of Kansas, to work with a team on research of farm-related pollution. He will strengthen research on animal waste disposal now being conducted in several departments of the College of Agriculture. Few people are cognizant of the vast animal waste problem. Unbelievable but true, a farmer with 100,000 hens has a waste problem comparable to a city of 10,000 people!

In addition, Great Lakes and smaller lake-pond studies are being conducted. Much of the current investigation involves study of waste discharge into lakes and the eutrophication (increase in nutrients) of bodies of water. Weeds have become a major problem in many lakes, but the reason for their abundance is too uncertain for meaningful control measures at this time.

Hugh Mulligan, of the Department of Agronomy, under a grant from the U.S. Office of Water Resource Research to the Cornell Center, is conducting research on specially designed ponds near the Ithaca airport in an effort to deal with the weed problem. These ponds are under surveillance to test the effects of herbicides, pesticides, and fertilizers on weed growth. Other studies relate this work to fish survival.

Yet another important area of research in which the

Water Resources Center is involved concerns community and resource development. More specifically, this involves an attempt to modernize New York State water law, to allow riparian owners (owners of part of a river or lake shore) to safeguard water rights, and to promote fuller use of waters. The present water law is very ambiguous, indicating that water should be allowed to flow in "natural quantity and quality." A new, more defined law could provide for fuller and better utilization of water.

Supply and demand research is also underway. Studies of interbasin transfer of water which could link river systems by pipelines is being investigated.

The development of water resources for increased recreational purposes is also a project of the Water Resources Center. Research is being done on ways to measure monetarily the value of water for recreation as a means of calculating the economic impact of a body of water.

Cornell has in its Water Resources Center one of the leading information centers in the area and the nation. The Center library collection, in the Engineering Library, contains an extensive permuted title index of periodical literature concerning water resources. Not only does the Center bring faculty together to discuss problems and identify interdepartmental projects, but it also aids in designing and promoting proposals for research grants.

The Cornell Water Resources Center is cooperatively engaged with other university centers to unite resources against future water problems, and to start fulfillment of a dream of a practical and extensive water resource system.



The flood damage in the cornfield above illustrates one problem the Water Resource Center is designed to handle.

SCULPTURE GARDEN BLOOMS

by CLAIRE GARRETT '70



If your wanderings have taken you down Forest Home Drive and over Fall Creek to a deserted area near the Cornell Plantations, you may already have discovered the Cornell Sculpture Garden. It is a very real, though relatively unknown, collection of modern concrete sculptures.

In the spring of 1961, Jack Squier, Associate Professor of Art, obtained from the University two acres of land near the Rose Gardens to be used by his students for a project. From his advanced class he selected one graduate student and four undergraduates to undertake the challenge of transforming this barren land into a sculpture garden.

The students began their work by making several plaster models of their designs. After selecting final versions, the students met to plan an esthetically pleasing arrangement of the five pieces.

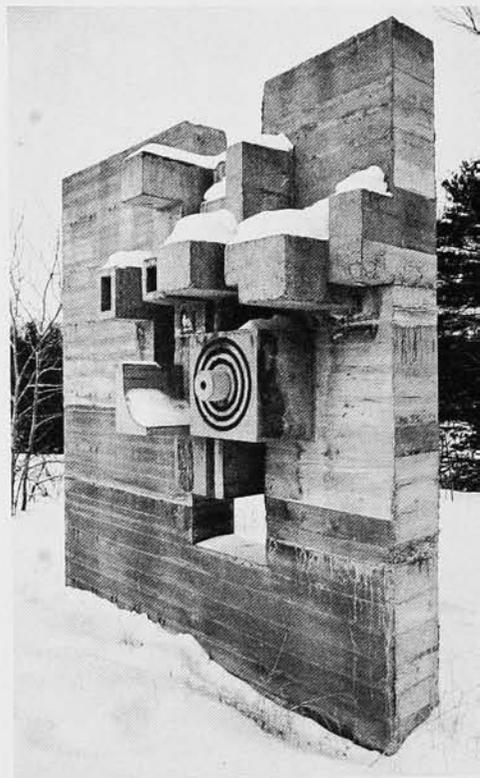
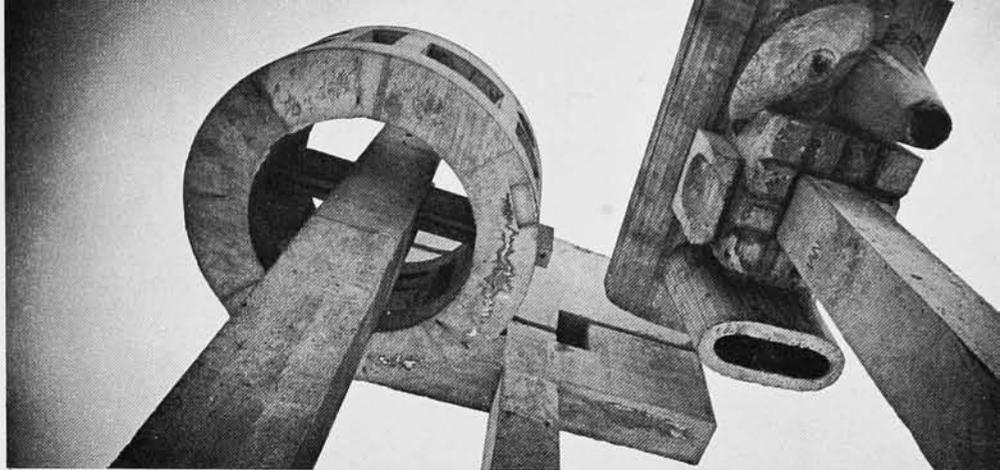
The artists then made working drawings of their pieces. They had to cope with the mathematical and engineering complexities involved in the professional construction of a seven foot, poured-in-place structure.

Five more pieces were added to these original five forms by subsequent sculpture classes. The same modernistic style was maintained in these later works.

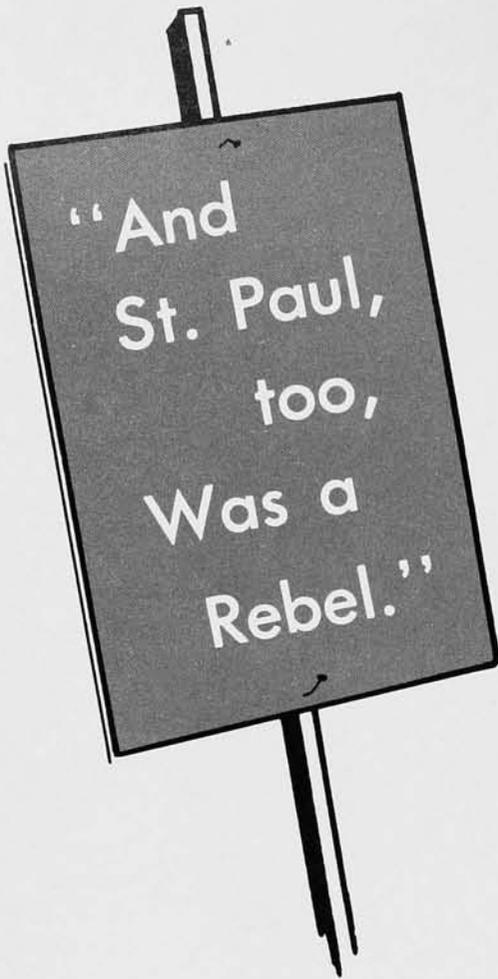
The accompanying photographs show just a sampling of the works to be found at the Sculpture Garden, a garden which blooms all year 'round.



FEBRUARY



A Profile of



In 1965, a Jesuit priest was assigned to an extended tour of Latin America. It seemed a routine matter. However, mere weeks after his departure, an open letter appeared in the *New York Times*. Above thousands of signatures was a statement of protest, insisting that the tour was, in fact, an "exile" — an exile designed to remove this cleric from the arena of anti-war and civil rights activity in which he was deeply involved.

After reading selections of his poetry in a Chicago church, he was asked a question on the Viet Nam war. After hearing his reply, the parish priest threatened to "throw him out." Immediately, another priest arose, and invited the speaker to continue at *his* church.

A member of Cornell's English Department has typed him as a "professional human being."

His non-credit seminars on the New Testament and on pacifism overflow with visitors and personal involvement.

For those actively involved in anti-war activity, he is a leader; and for many others, an inspiration. Such is the reputation already possessed by Father Daniel Berrigan, still in his first year as associate director of "the University's largest and oldest student organization," Cornell United Religious Work.

As associate director, Father Berrigan has no formal

connection with the Catholic chaplaincy (one of the fifteen included within the interdenominational religious organization). Rather, he directs the CURW social welfare and educational programs in Ithaca, East Harlem, Brazil, Honduras, Nova Scotia, and elsewhere. He has, in fact, served only four religious services, one of them to a non-denominational assemblage. Yet he has become a familiar figure throughout the campus. Whether leading a discussion group in the freshman dormitories, or leading an anti-war rally, Berrigan is clearly a man whom the student can trust. His honesty and concern for their problems keep his office and his calendar full.

Before his recent arrival at Cornell, his past activities had already given him a wide and diverse reputation. His declaration of civil disobedience, cosigned by his brother Philip, not only created reaction within the church, but further added his name to the growing list of clerical activists against the war in Viet Nam. This dedication was made additionally clear when he took the position of co-chairman of Clergy Concerned about Viet Nam, an organization which he helped to create.

Berrigan is, however, more than an anti-war clergyman. At 45, he has eight published volumes to his credit — four of poetry and four of prose essays. His first collection of poems, *Time Without Number*, gained him the coveted Lamont Poetry Award of the Academy of American Poets, in 1957.

A poet and a priest, he is also a teacher. Berrigan's seminars, though offering no credit, are constantly filled with students of diverse faiths and philosophies, anxious to listen and to participate. A skillful speaker, he begins his classes with a brief 15 or 20 minute lecture to create the base for subsequent discussion. Utilizing student response to provide direction, Berrigan leads the discussion, or often the debate, towards a focal point of his own choosing. As ideas begin to crystalize, he frequently calls a coffee break to give his students time to gather their arguments or consider their points of view. Upon reconvening, he will usually alter the discussion just enough to force his class to test their ideas in a modified situation. The seminar is often concluded by Berrigan before

Reverend Daniel Berrigan, S. J.

by PETER GOLL '68

discussion has truly reached settlement. He explains it as "keeping everybody revved up for next week." His methods are evidently successful, for he draws over forty people each week, including several faculty members.

Arriving at Cornell each day, he is invariably met at his office door by a knot of people waiting for him. They may want advice, aid with an anti-war program, information on topics ranging from a Cornell United Religious Work program to his latest book, or they might just want to talk. Across his desk passes the endless correspondence which is the result not only of his social activism, but also of his job, the scope of which is world wide.

In addition to his administrative obligations, Berrigan must prepare his seminars. For this work, he holds a special fondness, saying of his teaching, "I like it. Twelve years of my so-called adult life have been spent in the classroom. For a priest and a celibate, the closest thing to a community has always come about through teaching. Seminars I find very natural because they seem related to a new way of trying to appear with people as a brother, perhaps a slightly older brother, not as a 'competence person,' but as someone who earns respect as he goes along. . . . I really know, among the very few things I know now, that every time I violate that instinct in me to be increasingly non-verbal and to just create interstices that people can move through, I violate something very precious. . . . It takes a great deal of control sometimes, because you would like to play the oracle and rush in."

Berrigan has learned this lesson well. Both in classes and in his office, he prefers to comment on the statements of others, rather than dominating a conversation himself. One student, for example, contemplating withdrawal from the university had gone to see Berrigan for advice. Commenting on the interview, the student said, "I started talking and he let it all pass. Then he caught a piece of the real problem. 'What do you think of that?' he asked me. And then he made me talk it out. He just listened. That man knows the value of silence." The student did not leave school.

Yet, though he "knows the value of silence," Father

Berrigan is quite aware of the power of speech. In lectures before a multitude of audiences he has demonstrated his outspokenness with enough acuity to shock even the most apathetic listener. His commentary extends to many topics, both religious and secular, social and political. His stand is almost always anti-Establishment. He has called the "nation state" a "taxidermic illusion," and the intent of the church "*historically* murderous." Yet though he feels that the nation, and even the church, is "searching for death" in today's society, he does not consider the situation hopeless. "What a good man must hope for," he comments, "is for community, for a decent life together, for breathing space for the unborn. I would like to be a member of all sorts of mutually touching communities, where it is not required of people to live lives which are death-like in their despair and their exclusion from human structures. Then I would like the nation and the church to reflect this throughout the world."

Though often at odds with the church Establishment, Berrigan is quick to state that he would never leave the established clergy. Returning to his theme of the community, he said (in *Publisher's Weekly*, February 27, 1967) "I stay in it [the church] because it's a way of celebrating life. And it's better to do that in a community than alone." Despite his allusions to death in church and nation, Berrigan finds no discrepancy between his church affiliation and his anti-war dissension. Rather, he says, "For a priest to speak out on war should be no surprise. For him to be *silent* should be a surprise."

To praise Father Berrigan's work at Cornell, one need not subscribe to his political convictions. It is sufficient that this man, this scholar, this priest has within him the power to draw so many towards the guidance which only a clergyman can offer — a guidance which in recent years has been less and less utilized. If "God is dead," it can only be because the clergy are ineffectual. Only clergymen like Berrigan with a 20th century consciousness bring about a meaningful rebirth of God in this society. Having all but given up on the elder power structure, he says, "I place my hopes with the young people." It is to our benefit that he is doing so at Cornell.

Fall Creek: In Danger of Change

by ANTHONY D. INGRAHAM '69

"Flowing streams are fragile resources," says Professor L. S. Hamilton of Cornell's conservation department. And Fall Creek, one of Ithaca's most important natural resources "might be considerably altered" by the plans for its development that local interests have been promoting.

For decades, people in and around Cornell have been enjoying the services of Fall Creek. As what Frank Davenport, the district manager of the Division of Water Resources, has called "the most important tributary in the Cayuga Basin," Fall Creek furnishes Cornell University's water — as much as 3.5 million gallons per day. Its water is also used for irrigating 35 acres of Cornell experimental cropland.

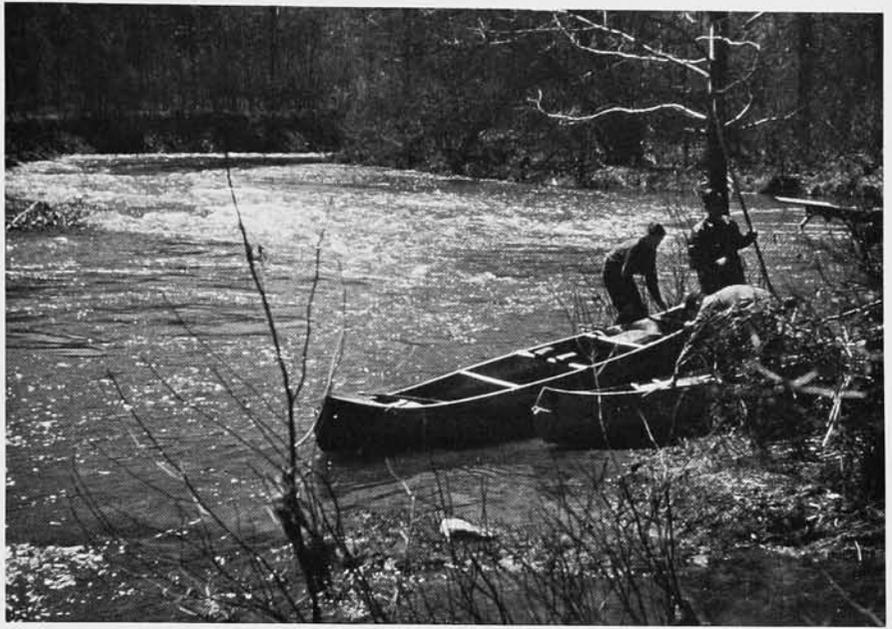
Local industries, such as the New York State Electric and Gas Corporation near Etna and the Ithaca Gun Company, use Fall Creek water which is returned to the stream when it is no longer needed. But most familiar and of most concern to the Cornell community is Fall Creek's capacity as a recreational, aesthetic, and scientific resource.

Fall Creek is the most important and most heavily used stream recreation resource in the Cayuga Lake basin. Pleasant country roads flank the stream along much of its length and bridges span it at several points, making it a popular attraction for the leisurely motorist. The most scenic area is the gorge section from Forest Home to below Ithaca Falls. Paths lead along and down



This detergent foam covered Beebe Lake last October. Unsightly as well as unhealthful, the foam is an example of one pollutant threatening the Lake's use for the University's multi-million gallon water supply and for recreation.

Fall Creek provides a picturesque setting with many opportunities for recreation. Students shown engage in one of the most popular pastimes in the spring – canoeing. Here they approach shore between Etna and Varna.



into the gorge, and the suspension bridge on the Cornell campus takes the foot traveler high above the cascading waters. The creek plunges over several falls in this stretch, the most spectacular of which is the ninety-foot drop at Ithaca Falls below the campus. For contrast, the paths around Beebe Lake provide quiet scenery for a stroll between classes.

During the warmer months, bathing and picnicking are very popular leisure-time activities along Fall Creek. The most popular swimming area is “Flat Rock” near the Cornell Rose Garden. There are numerous informal picnic sites along the Creek, some of which are complete with hand-constructed fireplaces and litter cans.

During most months, many adventurous individuals traverse Fall Creek in canoes and kayaks in the canoeable stretch from Lafayette Corners to the Rose Garden. Afternoon hikers use the trails constructed by the University and the City of Ithaca in the gorge area, and some take the Cayuga Trail, a very beautiful walk which runs from Thurston Avenue Bridge to Monkey Run Road.

Scouting groups use the stream for camping several times a year. The Scout office in Ithaca estimates that approximately 150 boys camp by Fall Creek each year. On Beebe Lake, ice skating is sponsored during the cold months, and lake canoeing during the warm weather.

Fall Creek is also the site of much scientific and educational interest. People engaged in aquatic studies and nature observation use the creek and its surrounding wooded banks throughout the year. Many derive pure aesthetic pleasure from the setting of Fall Creek.

Being such a subtle resource, Fall Creek is taken for

granted. But over time, this environment can be irreparably changed and destroyed by piecemeal projects for stream “improvement.” Out of a certain amount of necessity, several local interests are beginning to cast their eyes towards Fall Creek. They have thoughts of taking advantage of its potential for uses that could be in conflict with those who enjoy the stream for its scientific and recreational values.

The Cayuga Lake Basin Planning and Development Board looks at Fall Creek with an interest in meeting society’s needs for water. Six Mile Creek now supplies Ithaca with its water, but an additional source is needed. Fall Creek is on the top of the list for this privilege. Will this conflict with the University’s needs for water?

The communities of Dryden and Varna are installing sewerage systems. A conservation department study claims that “there will be considerable ecological change in Fall Creek which will have some impact on its use in scientific research and instruction at Cornell, Ithaca College, and State University at Cortland.”

The Local Property Owners Association is pushing for flood control projects on Fall Creek to prevent minor flood damage that sometimes occurs. This poses a threat to the area where most of the public recreation and scientific study on Fall Creek takes place.

The main aspect of this danger is the lack of organization on the part of those people who value Fall Creek for recreation and scientific study. The other interests are legitimate, but are there viable alternatives to the proposed plans? And if there are, who is going to point them out?

A BICYCLE TRIP FOR TWO

by JOSEPH BULSYS '71

On the night of June 25, 1967, a United Airlines flight was carrying Jonas Sipaila and myself, Joe Bulsys, from Rochester, N.Y., to Seattle, Washington. We sat quietly in our seats knowing a long-dreamed-of adventure had begun.

Within three days we would begin our long trek home. A lightweight bicycle would be our sole means of transportation across 2900 miles of expansive country in 33 days.

June 28 marked the first full day of "pedal pushing" as we started out for Rainier National Park and Chinook Pass (elevation 5440 feet). Fifteen hours later we came

to the first ridges of the Cascades and struggled uphill the entire day. The temperature plummeted from a warm 85 degrees down in the valley to a cold 35 degrees on the top of the pass.

The next three and a half days were spent in the Rattlesnake Hills of Washington. This is a rain-shadow desert area which is desolate, dry, and hot. The temperature was frequently above a hundred, and we both agreed the rattlesnakes could have it.

In another day and a half we were well into Idaho and the drastic change of terrain was unbelievable. Suddenly we had gone from parched desert to cool, lush

Joe Bulsys here stops to secure some packs on his bicycle on a road near White Sulfur Springs, Montana.





Jonas Sipaila rests on the shore of a reservoir in eastern Montana.

timberland and, needless to say, our spirits perked up. At one in the afternoon on July 4 we crossed Lolo Pass and glided downhill into Montana. Two days later we reached the Continental Divide as Jonas and I crossed McDonald Pass at an elevation of 6350 feet. Soon afterwards we hit the great prairies of Montana and never lost sight of them until we were well out of the state.

Approaching Miles City, Montana, we were hit by 50 mph winds and torrents of rain. Drenched, Jonas and I sought shelter — and found it in the local jailhouse thanks to the hospitality of the police. One night in jail was enough, so in the morning we fought wind and heat managing to make Glendive by nightfall.

The next day North Dakota and the Badlands loomed before us. We were apprehensive at first but soon discovered the Badlands of North Dakota could be traveled in one day. On July 14 we pedaled into Minnesota and, looking back, we both agreed that North Dakota, with its green fertile hills and gently rolling country, was very good to us. The three days spent in Minnesota were totally miserable as a result of the vicious mosquitoes which infest the land of the thousand lakes.

The 17th of July marked our entrance into Wisconsin and within a day and a half we entered Michigan. Duluth, the turning point of the trip, had been passed long ago and upon hitting Michigan we knew that arrival in

Rochester would be on the 30th, as planned. On the 21st we abandoned our bicycles for the first time on the 5-mile bridge over the straights of Mackinaw. Bicycles were not allowed on the bridge, but we did manage to get a ride across on a pickup truck. The remainder of the trip was routine and as planned we arrived in Rochester on July 30, 1967, at 3:00 p.m., happy and sun-tanned.

Looking back on the trip as a whole we managed to average 87 miles per day, and we were on the road approximately 10 hours each day. Our best mileage in one day was 134.2 in the vicinity of Dickinson, North Dakota. The hardest days were spent in the Rattlesnake Hills of Washington. In 33 days of traveling, Jonas and I spent a total of four under a roof. Three of these days were due to the hospitality of people met on the road and the fourth was in jail. The remainder of the nights were spent in places ranging anywhere from an abandoned boxcar, a grove of trees in the mountains, a boat pier, and a Great Lakes beach. We found that people in the West are friendlier than those in the East. We discovered that while passing through Canada most people would wave, smile, and yell, "Expo 67."

Since the completion of the bike trip many people have asked us why we went. The words challenge, adventure, and hard work seem to sum up the summer of 1967 — a dream come true.



Joe and Jonas pose for a picture with bikes decorated for arrival home in Rochester after their cross-country ride.

New Foods in an Expanding Universe

by ELLEN GROSSMAN '69

Professor Paul Buck of the Food Science Department thinks that the desire in some men to explore will always be present, and that continuing research and delving will always be done. The problem, says Dr. Buck, is how to spark this desire in *every* man, not just scientists, astronauts, and mountain climbers. Men must regain the gift they had as children to "want to know" — especially to want to know *why*.

Dr. Buck, rather than being frightened about the great innovations of the future, feels very confident. The future, according to him, will be quite wonderful. While still in the world of the here and now, as a scientist he has one foot in the world of the future.

Dr. Buck works in developing space foods for astronauts. The foods he has worked on were eaten in outer space by Gemini crew members. Although food, at this stage of space exploration, plays only a minor part in comparison to the engineering and mechanical aspects of space flight, food will become of major importance when we start going on space flights of two years or longer, according to Dr. Buck.

Just what are these so-called "space foods" that our astronauts eat? They are synthetically-made, very compact, dehydrated, hard foods. The foods must take up very little space since there is such little room to begin with. (The astronauts can hardly raise their arms higher than waist level.)

The astronauts can preselect their own individual menus before they go on their voyage. They can eat such things as roast beef, pot roast, shrimp cocktail, peas, fruit cocktail, bacon and eggs, and cheese sandwiches. All of these are very light weight and come in plastic packages. Some of the foods, such as fruit cocktail, can be rehydrated before eating by adding water through a water pistol into the plastic bag of food. Most of the foods, though, are hard. When the food is hard it must also be bite-size so the astronaut can pop the food into his mouth all at once instead of biting into it. This is to prevent bits or crumbs flying around in the spacecraft (remember, there is no gravity), for they might get caught in the instruments and cause a malfunctioning, or



Dr. Paul Buck

else the astronauts may breathe them into their lungs.

The space foods, being naturally combustible substances, as all foods are, would catch on fire from the heat, pressure, and oxygen in the capsule if they were not packaged in a non-combustible material.

Dr. Buck mentioned that the space foods must not cause any flatulence (i.e. passing of gas through the anus or mouth) because inside the capsule, the body odor of an astronaut is intolerable to his partner.

Only coliform-free organisms can be in the food, so as not to upset the metabolic system of the astronaut. The food is made in very aseptic conditions by such companies as Pillsbury, Swift, and Whirlpool, who bid for NASA contracts. If the astronaut hasn't finished all the food in a certain package, he can store it by first putting in a pill that disinfects the food.

Last October, Dr. Buck was honored by the Department of the Army for developing an entirely new coating material for space foods. The tasteless coating is made of rislin protein derived from lobster shells. It keeps the foods from breaking into crumbs and fragments, and from losing moisture.

Exploration is just beginning, and with it come new discoveries, new ideas, and new revelations. The time has come for the non-scientists also to take an active interest in what is going on, now and in the future. An expanded mind is needed to live in an expanded universe.

COUNTRYMAN CAPSULES

New York farmers can expect another reasonably good year in 1968 with net incomes about the same as in 1967, a Cornell University economist predicts.

Total receipts will be up, but farmers will face higher operating costs which will bring net income to the 1967 level, says Professor C. A. Bratton, Department of Agricultural Economics.

Bratton and other Cornell economists made these predictions in the 1968 New York Economic Handbook which takes a comprehensive look at what's ahead for Empire State farmers during the next 12 months.

Discussing the overall U.S. economy, Cornell economists see a continued rise in Gross National Product, the dollar value of all goods and services produced in the nation. It is expected to grow by about six to eight per cent in 1968, with inflation accounting for about three per cent of this expansion. The national economy has been expanding steadily for the seventh straight year, the longest period of uninterrupted economic expansion in U.S. history.



This year's enrollment in the nation's colleges of agriculture is 7 per cent above that of 1966. Fall-term enrollment for baccalaureate degree programs in agriculture was 47,723, compared with 44,596 students in 1966 — an increase of 3,127 students.

The enrollment figures are for 68 member institutions of the National Association of State Universities and Land-Grant Colleges.

Iowa State University, with 2,792

students, has the largest agricultural enrollment in the United States. The second largest college of agriculture, in terms of enrollment, is at Ohio State University with 2,155 students, followed by Cornell with 2,138 students.

Other colleges of agriculture in the top 10 enrollment are, in order, Purdue University, Texas A&M University, Oklahoma State University, University of Minnesota, University of Missouri, Michigan State University, and University of California.

Graduate students enrolled in agricultural courses of study increased almost 10 per cent. Total agricultural enrollment in graduate schools was 16,154 compared with 14,687 in 1966. Fields of graduate study showing the largest increases were animal science, agricultural economics, and agricultural education.



Martin E. Abel '56 has been named Deputy Assistant Secretary of Agriculture for International Affairs. Secretary of Agriculture Orville L. Freeman said Dr. Abel will provide leadership for USDA responsibilities in food aid and technical assistance programs under Assistant Secretary for International Affairs Dorothy H. Jacobson.

For the past 2 years, Dr. Abel has been staff assistant for foreign economics in the Office of the Administrator, Economic Research Service.

Early in 1967, he received a special USDA award "for outstanding professional competence, initiative, dedication, and leadership in research and consultation contributing significantly to a solution of a

wide variety of economic research problems and to the development of foreign agricultural policy."



LETTER TO THE EDITOR

DEAR SIR: I read with pleasure your noting in the "Countryman Capsules" column of the December 1967 issue of the selection of Thomas Gillette '68 and Richard Jones '70 by the Future Farmers of America as recent recipients of the organization's coveted American Farmer Degree, its top award.

In the interest of accuracy, it should be noted that these awards are presented annually to the most outstanding members and are limited to one per cent of the membership. The awards are presented for exceptional records of achievement in farming program development, leadership, scholarship, and service. Need, as included in your write-up, is not a factor.

The two students so honored were among seven members from New York State who received the award at 1967 National FFA Convention. Richard Jones, immediate Past President of the New York FFA Association, was additionally honored by being elected 1967-68 North Atlantic Regional Vice President of the National Organization.

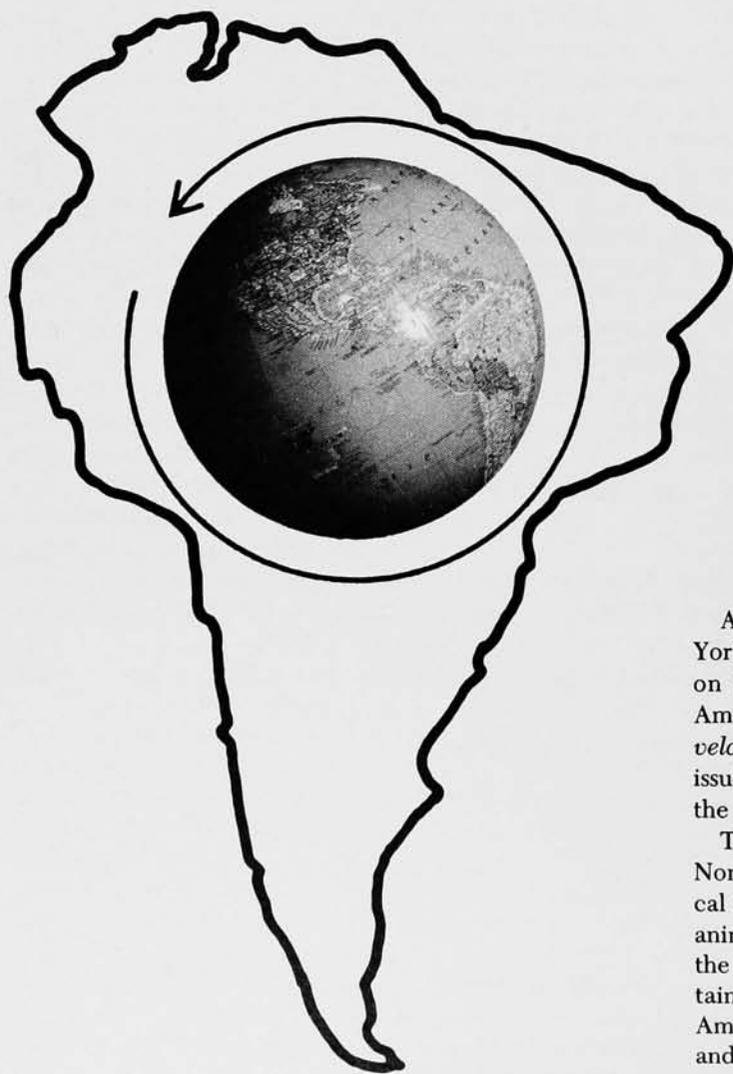
I thought you might be interested in this additional information. Keep up the fine work on your excellent periodical.

FRANK J. WOLFF '53
Past Executive Secretary
New York FFA Association

OF SPECIAL INTEREST TO YOU:

RURAL DEVELOPMENT IN TROPICAL LATIN AMERICA

EDITED BY KENNETH L. TURK AND LOY V. CROWDER



As part of the Cornell Latin American Year, the New York State College of Agriculture called a conference on the potentials of the hot-humid tropics in Latin American rural development. This new book, *Rural Development in Tropical Latin America*, presents the ideas, issues, problems, and possible solutions discussed during the conference.

The participants – outstanding Latin American and North American economists, bankers, sociologists, political scientists, agronomists, demographers, physicians, and animal and plant scientists – agreed that development of the tropical lowlands is essential if there is to be sustained material, cultural, and human progress in Latin America. This book helps clarify goals in Latin America and suggests ways to achieve them.

CORNELL COUNTRYMAN

VOL. LXV

MARCH, 1968

NO. 6



New-York
CAVAL LANDS
on SALE

LANDS
in the County of St. Lawrence,
STATE OF NEW-YORK.

JOURNAL

THE MANNING
LIBRARY

MAR 8 1968



[Handwritten text in an open book]

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ON THE COVER

The source of much of the information in the Archives is often a forgotten chest of papers in the attic. See page 10.

CORNELL COUNTRYMAN

MARCH 1968 / VOLUME LXV — NUMBER 6

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The Fascination of Beebe

by JIM OLIPHANT '68

“When you want to get away from it all” are the words of an orientation leader addressing Cornell freshman students. They are important words because they invite the student to roam one of the most beautiful



Skating on Beebe Lake, circa 1918.

college campuses in the nation. Beebe Lake is the most picturesque fragment of Cornell's complex of hills, lawns, slopes, and trees. The lake's trails, offering a view of the seasonal turns of nature, are open to everyone.

Originally, Beebe was a swamp. Then, in the late 1830's, Ezra Cornell built a dam over Triphammer Falls which impounded the water, thus transforming the marshland into a lake.

Today, many students visit Beebe Lake for casual walks or for exercise as they can rent various types of small boats and canoes from Japes, the shop below Noyes Lodge. In the cold Ithaca winter, when boats are in drydock, hockey and ice skating enthusiasts dash across the frozen water, sometimes noting on their backsides how frigid the lake can become.

For those interested in photography, the lake offers many lovely vistas and interesting compositions, and the seasonal, rhythmic changes provide an ever-changing source of good subject matter.

Sometimes, Beebe Lake holds amusing surprises for its visitors. One spring afternoon last April, as I sat upon a ledge reviewing notes for a final examination, the silence was broken by the unmistakable sound of a canoe moving through the water. A fisherman approached wearing blue jeans and sweatshirt, carrying a rod and smoking a corn cob pipe. On closer examination, the fisherman turned out to be a girl. To make the setting even more amusing, a hardy looking fellow came up to the ledge wearing a wetsuit or "skin diver's outfit."

"Fishing for sunken treasure?" I inquired.

"No, just for bicycles," he replied.

Saying nothing, I sat there and stared — casting curious glances to the fisherwoman on my right and the frogman on my left. Then, out of the depths of Beebe, it happened!

The young lady picked up her paddle and poked it toward the shore. She reached over her canoe and hoisted out of the water a fifteen-inch brook trout which was spawning near the shore. At almost the same time, the blurping noises made by the skin diver's air bubbles ceased and the diver, together with a ten-speed racing bicycle, emerged from the water.

Robert Cane, a major in the conservation department here at Cornell, noted that the brook trout was probably caught in the creek's current which winds down through Forest Home and ends up in Beebe Lake. But neither Bob nor any Cornell historian has yet offered a satisfactory explanation for the frogman's treasure.

Throughout the history of Cornell, Beebe Lake has been the site of other bizarre incidents. For instance, Morris Bishop, in his *History of Cornell*, relates the story of the invasion of the rhinoceros in the early 1920's.

Louis Fuertes, who graduated in 1897 and then became a nationally famous painter of birds, had in his studio a water-basket fashioned from a rhinoceros foot. Hugh C. Troy, '95, then professor of dairy industry, borrowed it, weighted it properly, attached ropes to both sides, and marched across campus one snowy night with a few assistants, raising and lowering the water basket to produce a set of tracks. The tracks led to the half

frozen lake and out to the edge of the ice. The following day a knowledgeable professor of zoology identified the tracks as those of a rhinoceros. Because Beebe Lake was then the source of the University water supply, a good proportion of the campus dwellers, including Hugh's own father, gave up drinking the water.

The future of Beebe Lake, however, may not be as amusing as her past. In recent years, shallow water has begun to predominate in many areas and in some places off shore the water is less than a foot deep. Erosion of the surrounding embankments has caused canoeists, fishermen, and nature lovers much concern. If this situation gets much worse, the lake may become a swamp and lose all of its former beauty.

Professor Freeman of the Department of Communication Arts notes, "It's a real tragedy watching the land close in on Beebe. I and others have written many letters to University and State officials requesting that someone

Johnny Parsons Club on Beebe Lake.

look into this problem and hopefully find a solution."

Though Beebe's future seems bleak, Bob Cane sees hope. "People are aware that Beebe's bottom is filling in with sand and land deposits. But once the funds are gathered, engineers will probably dig a new bottom for the lake or do something else to keep the water level up."

For students, visitors to the campus, and neighboring Ithacans, this is good news. For spring is on the way. Soon all the leaves will be out, flushed with green. Soon the fisherman will cast his line and canoes will be launched. Students will have picnics, roasting hot dogs and hamburgers, and the birds will be home singing after their long winter stay in the warm South.

Fortunately, Beebe Lake is far from gone. And one has a good feeling that in the years to come, it will remain the most picturesque, inspiring part of the Cornell campus.



The New York State Barge Canal

by CHARLES G. WILSON '69

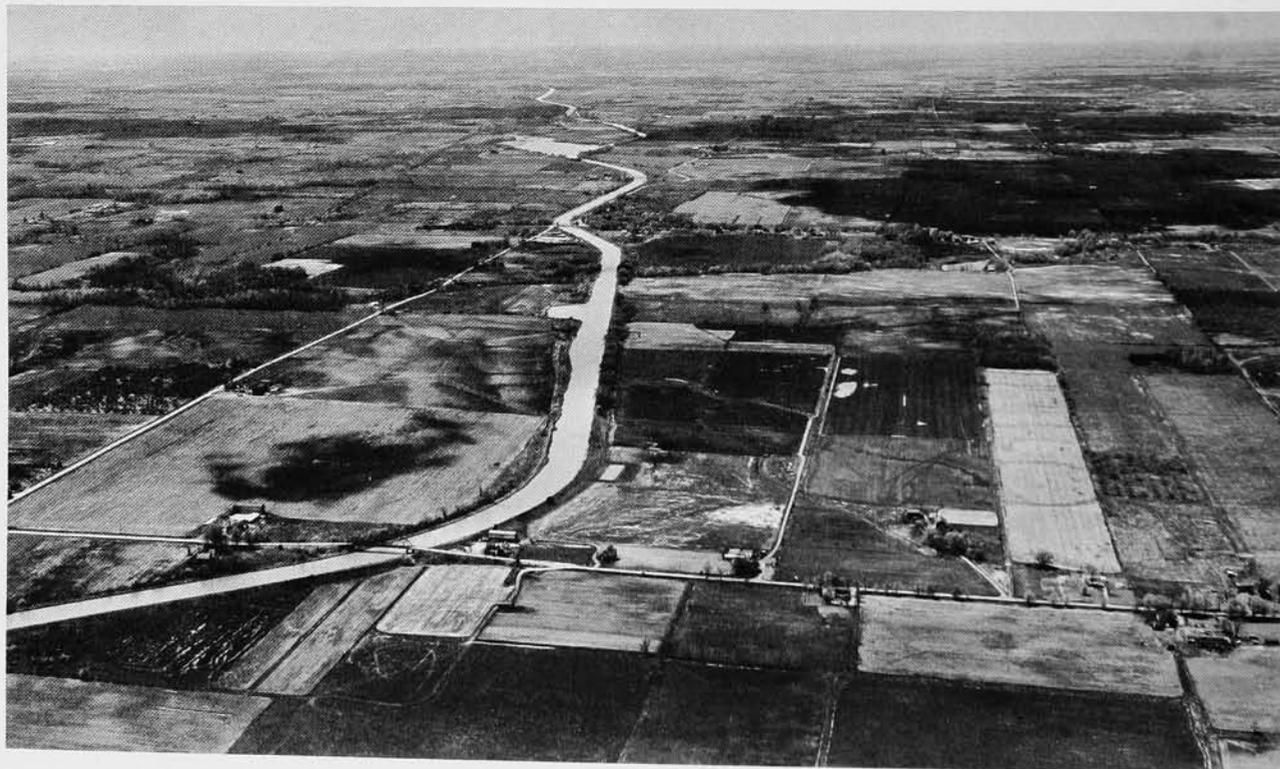
The old Erie Canal or "Clinton's Ditch" has undergone vast changes since the days when horse-drawn boats carried goods across New York State. The old canal was the most significant of the early American canals and was a financial success at a time when other canals were encountering monetary difficulties. The development of railroads, however, brought an end to the dominance of canal transportation and a steady decline in the importance of the Erie Canal.

In the early twentieth century there was a renewal of interest in canals and inland waterways. This interest was a result of higher rates and competitive practices on the part of the railroads. These practices led to a demand for railroad regulation and the provision of other forms of transport. In 1905, New York State began the reconstruction of the Erie Canal. The new canal system, called the New York State Barge Canal, was completed in 1918.

The building of the canal was an extensive and costly process. A \$101 million bond issue was raised in New York in order to finance the construction. This was the largest bond issue ever raised by a single state up to that time. The total cost of building the new canal was about \$154 million. The result was a canal with much larger dimensions which could service much larger craft and more cargo. The new canal was capable of accommodating weights up to 3,000 tons while the maximum weight load which the old canal could carry was 240 tons on each boat.

Just as the railroads reduced the importance of the old Erie Canal, modern methods of truck transportation have replaced the barge canal. The amount of material shipped on the Barge Canal has decreased steadily since the advent of large scale truck transportation. Despite this, many kinds of goods are still shipped through the canal. Chemicals, cement, molasses, machinery, paper, iron,

A recent aerial view of the Canal.



steel, petroleum, and petroleum products still move from place to place through the canal route.

The Barge Canal is now operated by the State as is the highway system. The cost of the canal is considerably lower than that of the highway system. Because of the decreased use of the canal for shipping and the fact that it can only be used during the warm months, it is now assuming a wide variety of other uses. Mr. Arnold H. Barben, president of the Canal Society of New York State, says that the trucks were the "downfall of the big barge as a shipper." He adds that this has led to an expanded use of the canal which includes many new and different activities.

The most important new use of the canal is as an avenue of transportation for pleasure boats. The number of people who are traveling in pleasure boats has increased steadily, and business on the canal is booming. Enthusiasts can register their craft and obtain pleasure boat permits at no charge. The locks on the canal let pleasure boats through on the hour and commercial boats are locked anytime.

The canal is being used extensively for irrigation, especially west of Lyons, New York. Inexpensive permits

to take water from the canal for irrigation can be obtained from the Canal Department in Albany.

Power plants to run the machinery on the canal also provide energy for industrial use. In Crescent and Vischer's Ferry, New York, the surplus electric power is sold to utility companies for their use.

The canal is an excellent tool in the process of flood control in New York State. Many of the lakes in the State act as reservoirs for the canal and so it is possible to keep them at desired levels. The level of the lakes is raised or lowered depending on the amount of rain expected or the possibility of flood conditions.

One problem with the present canal is a widespread one, that of water pollution. Conservation clubs and pure water advocates are among the groups and individuals fighting this hazard, and laws are being passed to keep the water clean.

This is the Barge Canal – shipper, irrigator, flood controller, power plant and recreation area. The Barge Canal and its predecessor, the old Erie Canal, have played an important role in the history of New York State. Today the Canal continues to play a valuable and versatile part in the affairs of New York State.

A lock on the Cayuga-Seneca branch of the old Erie Canal in Waterloo, New York, about 1900.



Birds by Carl Mueller

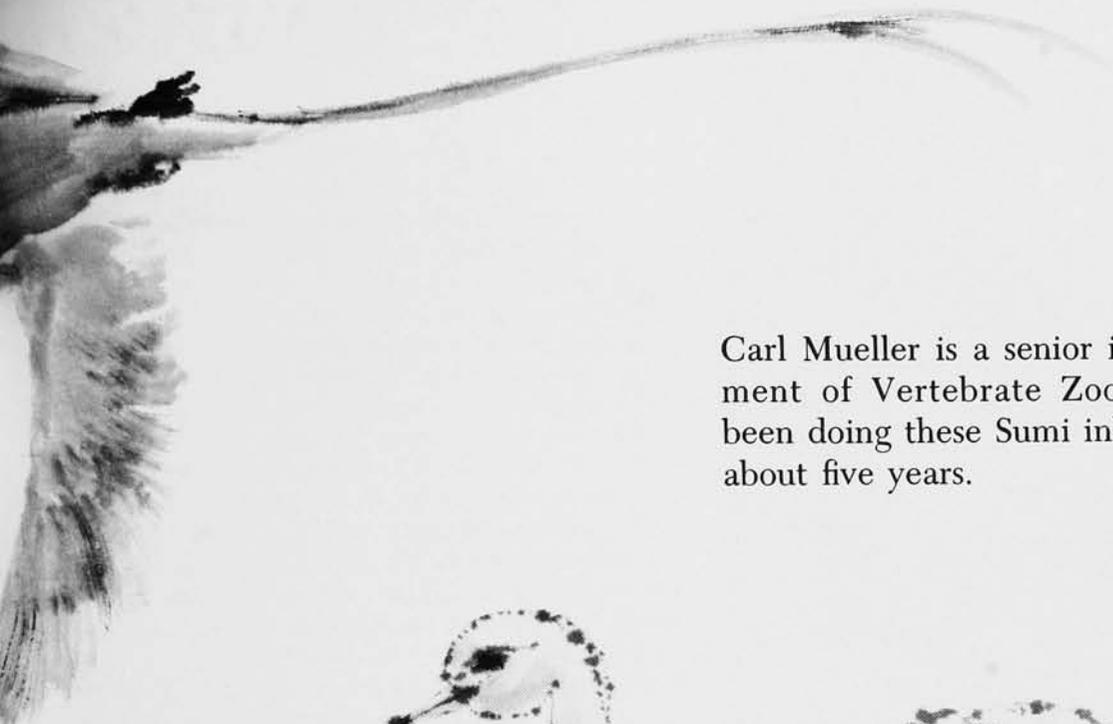


Cassowary



Masi ostrich

White-tailed tropic bird

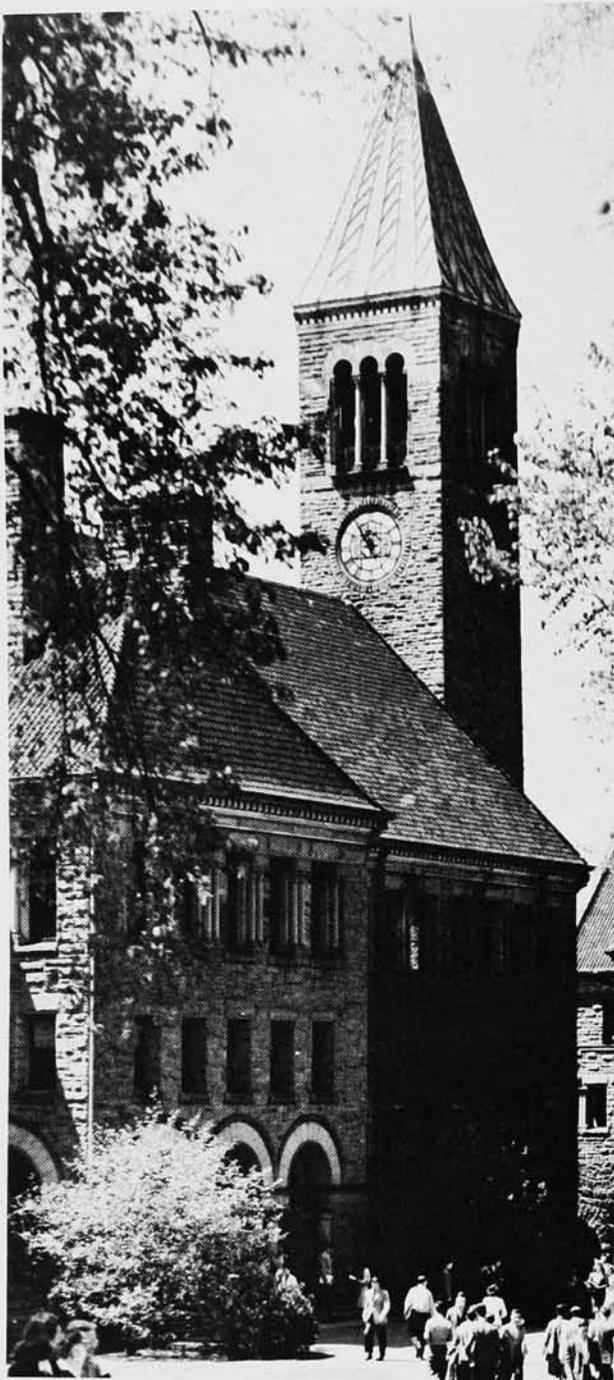


Carl Mueller is a senior in the Department of Vertebrate Zoology and has been doing these Sumi ink drawings for about five years.



Emu (young)

REGIONAL AND THE



Boardman Hall, where the Regional History Collection and the University Archives were housed from 1942-1952. From October 1952 until 1962, the Archives was located in the basement of Mann Library. In 1962, the collection was moved to Olin Library, where it occupies two basement levels.

“And this,” said Miss Shepherd, administrative aide in the University Archives, “is one of the original gas-light lamps used to light up Sage Hall. No museum seems to want them, and we just can’t bear to throw them away.”

The lamp Miss Shepherd displayed before me, I discovered, is representative of the enormous collection of papers, exhibits, furniture, mechanical devices, jewelry, and photographs that comprise the Collection of Regional History and the University Archives.

The two divisions, although distinctly separate, are housed together on two levels in the basement of Olin Library and served by a common staff of which Miss Shepherd is a member. The Regional History Collection consists of all material relevant to the history of rural New York State and the Archives houses all historical items of interest to the University.

The collections were started officially in 1942 with the aid of a grant from the Rockefeller Foundation and have grown steadily since. Many of the older documents, since they have high rag content, can be stored as is, but a great number of contemporary papers are cheap pulp and must be treated before storage. All items received are carefully placed in special boxes to retard deterioration.

As this was my first visit to the Archives, I was curious to learn how they determined what is saved and what is discarded. “Well,” said Miss Shepherd, “we save everything we think will be of value to the historian one hundred years from now.”

Among the collections are the correspondences of Ezra Cornell and Andrew Dickson White, a complete photographic collection of the University, back issues of all Cornell publications, copies of posters announcing student events such as concerts and sit-ins, the Charter of the University, the words of all songs about Cornell since 1876, Ezra Cornell’s safe, and thousands of papers written by faculty members. This last item is especially significant. Not only do the papers receive expert care for permanent preservation, but they provide the Archives with a valuable research collection.

The circumstances surrounding the acquisition of the University Charter are quite interesting. It seems that although everyone was certain that there was a charter, no one knew exactly where it was. In short, it was lost. However, six years ago, Mrs. Edith Fox, then chief curator, was looking through some old papers in the vault of Uris Library while researching a paper when she came

HISTORY ARCHIVES

by ROBERT FISH '67

across the aged document. Excited with her valuable find, she quickly added it to the Archives.

The collections have helped the College of Agriculture aid farmers in surrounding areas. The Agricultural Extension Service has used the Regional History Collection extensively in researching such items as accounts of the Dairymen's League and has drawn upon the research papers of deans and professors of the College as well as records of individual departments within the College that are housed in the Archives.

One of the more fascinating collections consists of local New York State newspapers that are saved regularly by the Archives. Miss Shepherd observed that "every library in the country saves the Times, but the Times doesn't report everything. One hundred years from now certainly someone will care about the social life of rural New York circa 1968."

The most famous collection, however, is the Stephen H. Douglas Collection of Political Americana, consisting of thousands of campaign articles including broadsides, leaflets, posters, cartoons, engravings, campaign buttons, parade items, and jewelry. The collection has drawn visitors from all over the world, especially those doing historical research in the fields of government.

Naturally, the historical significance of some of the other collections is more difficult to justify. The Archives include, for example, two printed copies of Harvey Griswold's studies of Hinduism in New York, a record of baptisms copied from the parish registers of the Cayuga Chapter of the Daughters of the American Revolution, a history of cheese factories in Cortland, a suggested syllabus drawn up in 1913 to teach boat-building in the College of Agriculture, and 192 glossy prints of the Ontario, New York, and Western Railway.

As many of the collections are truly invaluable, heavy security measures are taken to protect them. No one is allowed to walk through the stacks unless accompanied by a staff member. If you wish to examine a collection personally, a staff member will find it and bring it to you in the reading room on the first floor where all research must be done. To prevent any robberies at night, the elevator is locked at the basement level making entrance to the stacks virtually impossible. In fact, even during the day, getting permission from the staff to use the collection facilities requires a legitimate reason. The collection, however, provides a complete and vivid history of the University and the surrounding area, and any difficulty in gaining access to it is well worth the effort.



Mrs. Edith Fox (left), former curator of the University Archives, and a graduate student work at classifying a collection of historical documents. These documents are business and personal papers of Henry W. Sage, 19th century lumber king and a principal benefactor of the University.

SPEEDING UP LIBRARY WORK

by GEORGE LIPPERT '67

Biological Abstracts, Zoological Record, Chemical Abstracts . . . these are but three of the many abstracting journals a student or professor will spend many hours studying when doing research. How nice it would be to submit to a computer operator an IBM card with the information you want punched out on it and then to receive a printed list of all pertinent references. A start has been made at Cornell to make this wish a reality.

The first problem in library automation is to get the books to the students as fast as possible after they are received. Since the State colleges alone handle five to six thousand orders, totaling ten to twelve thousand volumes in one month, and have to deal with over 2,700 dealers, it can be seen that the bookkeeping and correspondence alone can cause delays. As of February 1, 1968, ordering, receiving, accounting, and taking inventory is accomplished by computer. In addition, the twelve most common currencies are converted by this massive IBM 360 65. Twenty-six monthly reports are kept and a printed list of all books on order or in process is issued.

Edmund Hollenbeck, a recent addition to Cornell's Research Park staff, is in charge of programming, or feeding the data into the machine. This is done by first punching the data out onto IBM cards, placing them into the computer, thus transferring the information to tapes, which resemble recording tapes, or to discs which resemble phonograph records. However, the principle on which this type of recording is founded is entirely different from that of tape recording.

Because reports on the processing of books are needed

by librarians and professors, the computer prints a list of books that are either on order, have been received, or have been processed. This is done at the rate of 110 lines per minute.

Ryburn M. Ross, assistant director of University Libraries, points out that statistical reports are needed each month so that librarians can know how much money is available for the purchase of books. It takes two trained people 10 days to prepare this report; the machine can do it in one day. Ross says, "One of our biggest headaches in preparing this report is the conversions needed when dealing with foreign currency. The computer can now do this for us."

In some respects the computer seems almost human. For example, information is fed into the computer which tells it when to expect that a given dealer should have fulfilled his order. If by the stated time he has not delivered, the machine automatically prepares a letter asking him what the holdup is.

"Many other services will be available as time goes on," Ross says. Hollenbeck says that the computer is less apt to err and is quite a lot faster. But the human is the master. He feeds the machine, he decides which books to order. It is interesting to note that when a mistake is made the machine is capable of letting us know. For example, if the computer is told to order a book, and it is subsequently given an identical IBM card for the same book, with the same order number, the second card will be rejected.

Interestingly enough, Ross points out that as the pro-



gram expands, larger and larger computers will be needed, and each successively larger one will be controlled by the one it replaced. This is just the opposite of conventional advancement based on seniority.

While it may seem cumbersome to a person pouring through Reader's Guide, Biological Abstracts, Chemical Abstracts, or any of the other abstracting journals, Mrs. Margaret Martin, a librarian at the Physical Sciences Library at Cornell, feels that serials are being quite adequately covered by abstracting and indexing journals, especially since they now are being prepared by computers. She pointed out, however, that it will be a long time before the machine will be able to do a thorough job of summarizing the literature, which would involve not only title, but text also.

Mrs. Martin feels that chemists are quite fortunate in that their major reference, Chemical Abstracts, does search title and text. In a recent study, she was asked to keep a list of all queries which she received from students and professors for which the staff could find no answer. Though not a chemist herself, she did not find one case where information of a relevant nature could

not be found. "Admittedly," she says, "it often took some time, with three or four librarians searching, but the information was there." She feels, however, that eventually for maximum efficiency, librarians are going to have to be specialists in the field in which they work, and the same is certainly true for computer programmers.

"There are so many abstracting journals," says Mrs. Martin, "that professors are complaining that they can't possibly go through them all." She agrees that a single large abstracting journal for each major discipline is what is needed. Some duplication would have to occur, however, because of fields which overlap such as Bio-physics.

While the main projects at Cornell have, for the present, involved automating the acquisitions department, Dr. Gerald Salton, a computer specialist, will begin a side project to experiment with information retrieval.

The ability of computers to "comprehend" and store information and then to retrieve it when it is needed will eventually make every piece of printed information available in a matter of hours. However, don't put off using the current journals in anticipation; that goal will not be reached for at least another couple of generations.

Andrew Dickson White Library interior.



The Old and the New

AGRONOMY FIELD TRIP

by TAMAR ASEDO '69

In mid-August, while most Cornellians were still vacationing, students of Agronomy 461 began their term's work with a 22-day field trip through 15 southeastern states. The purpose of this trip was to give the students first-hand knowledge of crops, soils, agriculture, agricultural industries and agricultural institutions in regions unlike the Northeast.

To appreciate the significance of the different kinds of agricultural systems, the students were reminded that "some environmental factors are distributed over large areas, whereas others dominate local areas." Most macro-shifts of agriculture are related to regional differences of climate and the associated native vegetation. Locally, different land use, crop selection, and management practices result from differences in kinds of soil materials and topography.

The 27 students, both undergraduate and graduate, represented the United States and eight foreign countries, as well as six different fields of specialization. Each student was asked to select one or two phases of agriculture, of a general nature, to serve as focal points during the trip and as bases for a trip report, required by all participants. The course continued in the fall semester with seminar-discussion groups on topics related to the study tour.

Tobacco is grown on small farms throughout the Southeast. Profit per acre is high; therefore, tobacco supports more farms than any other crop.



The southern U.S. is the northern limit of sugar cane production. The cane grows vigorously, with sugar stored in the lower and middle portions of the stalk.

A meeting to discuss 1968 plans for Agronomy 461 will be held at 7:30 p.m. on Tuesday, March 19, in Room 100 Caldwell Hall. Interested students and advisors are invited to attend.

Conservation of land resources is essential for maintaining agricultural productivity. An excess of water is generally the problem in the South. Any unprotected slope is subject to severe erosion under heavy rainfall.



COUNTRYMAN CAPSULES

Alumni Association Annual Meeting and Luncheon

The Annual Meeting and Luncheon of the College of Agriculture Alumni Association will be held in the Statler Ballroom, March 21, 1968, immediately following the morning session of the Agricultural Leaders' Forum. Advance registrations may be made by sending name, address and \$3.00 to Professor Stanley W. Warren, Warren Hall.

Irwin H. King '58 has been appointed Secretary of the New York State Conservation Department, it was announced by Conservation Commissioner R. Stewart Kilborne.

Mr. King joined the Department in 1962 after working for the Department of Agriculture and Markets. His background includes newspaper work, radio, television, magazine writing, and public relations work. During the Korean War he served in the Army specializing in radio and communications.

Mr. King, his wife and their six children, are living at Woodview Farms in Delanson, New York.

PICTURE CREDITS

Cover, pages 3, 4, 5, 7, 10, 11 and 13 – University Archives; page 6 – New York State Commission for the Preservation of Agricultural Land; page 12 – David Reuther; page 14 – Department of Agronomy; page 15 – Agricultural Alumni Association.



Norman Smith '49, fourth from left, President of the Agriculture Alumni Association, presents Alumni Association check to Dean Charles E. Palm to initiate the Agricultural Alumni Endowment Fund. Also pictured, from left, H. L. Everett, Director of Resident Instruction; Ralph E. Winson '55, Vice President of the Agriculture Alumni Association; Stanley W. Warren '27, Treasurer of the Alumni Association; and Donald C. Whiteman '39, Past President of the Alumni Association and Chairman of the Alumni Endowment Fund.

Cornell University has established the Agricultural Alumni Endowment Fund, income from which will support activities related to the education of students in the College of Agriculture. The Fund was established through the efforts of the Alumni Association of the New York State College of Agriculture.

According to Dean Charles E. Palm, "the Endowment Fund will make it possible for alumni and friends of the College to participate in a direct and meaningful way in our programs. Some of the initial capital will come from the consolidation of smaller funds, but the primary source will be from personal gifts. We expect that most of the income from the endowment will be used for scholarships."

First contributors to the new Fund

were the Alumni Association itself and Dr. M. P. Catherwood, PhD '30, formerly Professor of Agricultural Economics and Dean of the School of Industrial and Labor Relations. Catherwood is currently Industrial Commissioner for the State of New York.

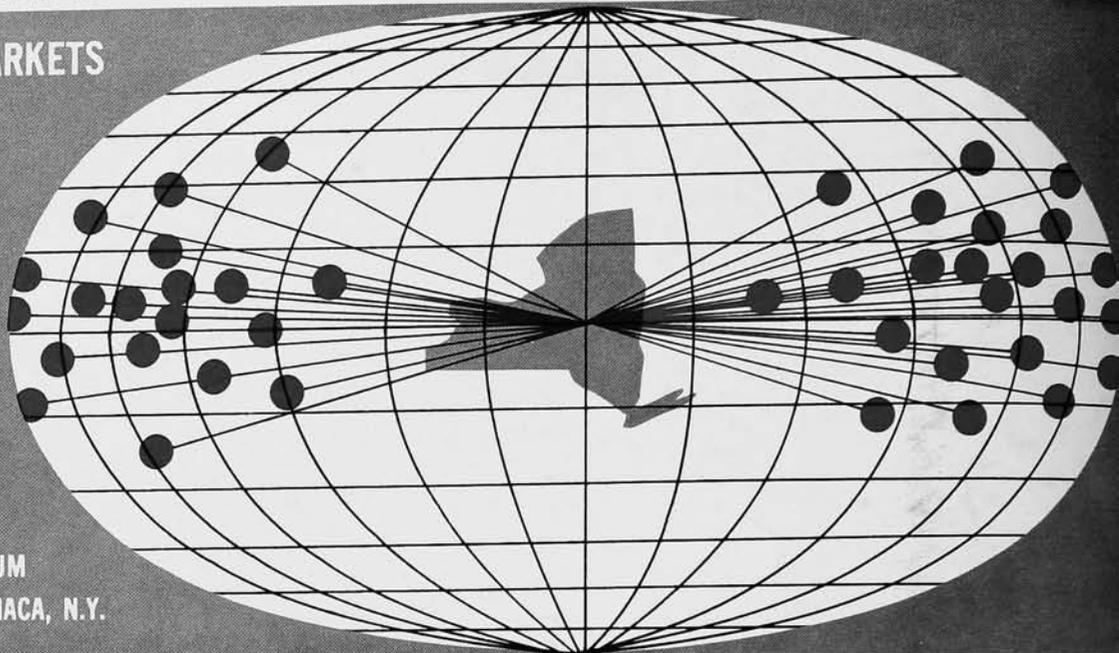
Donald C. Whiteman '49 of Adams, New York has been appointed Chairman of the Endowment Fund campaign. He will be working closely with College and University administration and agricultural leaders in organizing the campaign for funds. Initial plans will be announced at the Annual Meeting and luncheon of the Alumni Association on March 21. Further announcements on how alumni and others may contribute will be made through the COUNTRYMAN and other media.

YOU ARE INVITED TO HEAR A DISCUSSION OF

**WORLD FOOD MARKETS
AND THE
NEW YORK
FARMER**

**CORNELL
UNIVERSITY'S
AGRICULTURAL
LEADERS'
FORUM**

**MARCH 21, 1968
ALICE STATLER AUDITORIUM
CORNELL UNIVERSITY, ITHACA, N.Y.**



World food production vs. world food needs gains exciting dimensions when tied specifically to the New York farmer. Five knowledgeable and stimulating speakers will appear as follows:

- 10:00 a.m. World Food: Present Situation and Future Prospects**
Don Paarlberg, Professor, Agricultural Economic Policy, Purdue University
- 10:40 a.m. International Markets for Food**
W. S. Lindsay, Assistant to the President, Corn Products Company, Chicago
- 11:20 a.m. Competition from New Food Products and Processes**
C. O. Chichester, Chairman, Department of Food Science and Technology, University of California, Davis
- 2:00 p.m. Feeding the World—Priorities and Responsibilities**
Ivan L. Bennett, Jr., Deputy Director, Office of Science and Technology, White House, Washington
- 2:40 p.m. Implications for New York Farmers**
K. L. Robinson, Professor, Agricultural Economics, Cornell University
- 3:00 p.m. Panel: Question and Answer Session**
- 3:30 p.m. Adjournment**

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CORNELL COUNTRYMAN

VOL. LXV

APRIL, 1968

NO. 7



ALBERT R. MANN
LIBRARY

APR 8 1968

ON THE COVER

The New York State seal is engraved in stone over the entrance to Mann Hall, which houses the library of the New York State Colleges of Agriculture and Home Economics.

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CORNELL COUNTRYMAN APRIL 1968 / VOLUME LXV — NUMBER 7

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“We’ll all have drinks . . .”

by BROOKE C. BRESLOW '68

“We’ll all have drinks at Theodore Zinck’s when I get back next fall.” But Zinck’s closed permanently last year leaving fond memories for generations of Cornellians and meaningless lyrics for many generations of Cornellians to come. Zinck’s was one of those small unglamorous places known in campus towns as a collegiate hangout. In larger, less college-oriented communities, it would be called a bar. But there was an atmosphere to Zinck’s, an atmosphere fostered by narrow tables gutted with the initials of thousands of Cornellians.

At the turn of the century, Zinck’s place in the social life of a Cornellian was much as it was ten years ago. Enduring for such a long time, the atmosphere of Zinck’s changed sharply when it was forced, because of urban renewal, to relocate across the street from its original setting. Because of its downtown location, Zinck’s had become a predominantly upperclass and graduate hang-

out, particularly for the sophisticates of the Law School. But with the loss of its original atmosphere came an increase in the number of local residents as clientele and what was once a collegiate hangout became a bar.

The saga of Zinck’s is not the only tale of demise in the Ithaca area. Cornellians returning for their fifth year reunion this June will also find Obie’s absent from the Ithaca scene. But the story of Obie’s does not duplicate that of Zinck’s. Obie’s traditions were not as deep-rooted as Zinck’s although Obie’s was certainly more a one-man establishment. Theodore Zinck drowned in Cayuga Lake in 1903 but the tavern bearing his name prospered many years after his death. Obie’s was not a place of subtle atmosphere; it was bright and it served quick late-night and early-morning snacks to tired students. But transportation was needed to get to Obie’s and while its business was good, it maintained a limited clientele.

Friends gather for the last night at Zinck’s.



Leonardo's was more in the style of Zinck's although its atmosphere was certainly Italian. As a favorite college-town restaurant, Leonardo's is well-remembered by many Cornellians. When, however, those alumni return to campus for their tenth year reunion, they'll discover that the Italian has been traded for German and Leonardo's is now the Alt Heidelberg. The atmosphere, too, has changed greatly from checkered tablecloths to striped go-go girls, but the Alt Heidelberg is just as busy as Leonardo's ever was. The changing times and the changing student have resulted in the new atmosphere of student hangouts.

A prime example of this new type of student retreat is Jim's, known more commonly now as The Chapter House. Jim's has a long history starting in the post-Prohibition years when a candy store, a shoe store and a flower store were combined into one large restaurant. The owner of the candy store, Jim Flores, became the owner of the new restaurant, replete with a soda fountain. Jim's would open early in the morning and serve large helpings of eggs and pancakes to the hungry students who were dissatisfied with the meagre dining facilities then in operation on the Cornell campus. Jim's would provide vanilla malts and chocolate phosphates into the late evening every day of the week, but today the soda fountain of The Chapter House is idle. The ample dining facilities now available on campus have made Jim's food service obsolete.

In the four years since Jim's became The Chapter House, the steaks and Italian dinners have been substituted by quick snacks and pitchers of beer. The management tries to develop original drinks for the large clientele such as the "swinger," imported from Boston, which is a mixture of rum, gin, vodka, and lemon juice. But this student hangout is still full of atmosphere. The large mugs hanging over the bar date back to the 1930's and there are still caricatures of the undefeated 1939 football team hanging in an alcove of the barroom. Some of the atmosphere, pictures of the Cornell campus, has been lost through the years due to some over-zealous student customers, but Jim's, although the menu is different, still serves the brand of atmosphere the students want.

In recent years, new student hangouts have developed both on and off the campus. The idea of a railroad boxcar being converted into a bar became a reality in 1965 with the opening of the Boxcar northeast of campus. The Boxcar is small and cozy and offers much the same atmosphere that was to be found at Zinck's except that the 1920's aura is spruced up by the plushness of the 1960's.

The decade of the 60's also resulted in the advent of the coffee house. In the vanguard of the Cornell coffee house movement was the Unmuzzled Ox located in the basement of the Lutheran Church parish house in Collegetown. Its rustic atmosphere is enriched by the heavy fragrance of thick Oxburgers and rich red wines. Run by

students, the Ox, open only on weekends, epitomizes the mood of the coffee house. The Commons, located in Anabel Taylor Hall, also satisfies the requirements of a coffee house although the setting is more conventional than the Ox's. The key attractions of the Commons are the good coffee served and the entertainment.

The Temple of Zeus, in Goldwin Smith Hall, most recent addition to the coffee house scene at Cornell, is a daytime operation. Frequented mostly by students and faculty for extended coffee breaks, it is fast becoming one of Cornell's greatest coffee house successes.

The soda fountain, the bar, the ethnic restaurant, and the coffee house have all catered to varying student needs. Today, the Ithaca area offers a wide variety of hangouts available to a wide variety of students. While the steady drum beats and electric guitars twang at the Alt Heidelberg, intimacy still reigns at the Unmuzzled Ox. Obie's, Leonardo's and Zinck's may be gone from the Cornell scene, but they are being replaced by the Boxcar, the Ox and the Heidelberg. Perhaps the coming generations of Cornellians won't have heard of Theodore Zinck's but just tell them it was something like the Boxcar and Jim's and they'll catch on.



Four in the morning: Obie writes another bill.

The Roll of the Kettle Drum

by MARTIN SENNETT '70

"Psychedelic Rock Concert!" screams the advertisement. "Tickets go on sale at noon today!" And the lines grow. Half of Cornell will be there. Rocking. But what of the rest? What of those who prefer the roll of the kettle drum to the rock of the electric guitar? Happily, they are not forgotten. In fact, they are waiting in the same line. Not for tickets to the "Electric Psychedelic Rock Band," but rather to buy tickets to discovery. The discovery of the Buffalo Philharmonic Orchestra for some, or the music of Julian Bream for others.

Responsibility for providing the opportunity to make these discoveries falls chiefly to two organizations, the University Faculty Committee on Music, and the music department of the College of Arts and Sciences. The Faculty Committee is the group that schedules and sponsors the three main concert series at the University during the school year. These are the Blue and Green series at Bailey Hall and the chamber music series at Alice Statler Auditorium. Each series consists of four concerts throughout the year, two each semester. In the past, such well known figures as Artur Rubenstein and Van Cliburn have performed at Bailey Hall, and, in general, the artists selected are always of the highest caliber. The concerts are conducted on a non-profit basis, with tickets being sold chiefly by subscription.

While attendance at the paid concerts runs heavily toward faculty and townspeople, students predominate at the free concerts given on campus. Sponsored by the Music Department and Willard Straight Hall, these occur every Sunday afternoon at four o'clock, and two or three Mondays a month at four-thirty. The artists are usually music department faculty or students, although occasionally non-University members do perform. These concerts offer an excellent opportunity for the poverty-stricken student to acquaint himself with the various types of classical music. They cost nothing, and the performances range all the way from bagpipes to the most delicate chamber music.

Such presentations are especially valuable to the serious student of music. They give him the rare opportunity of observing his professors at work in the art which they have perfected. From such immediate observation, he can learn the fine points of technique to which his musico-logy text can only allude.

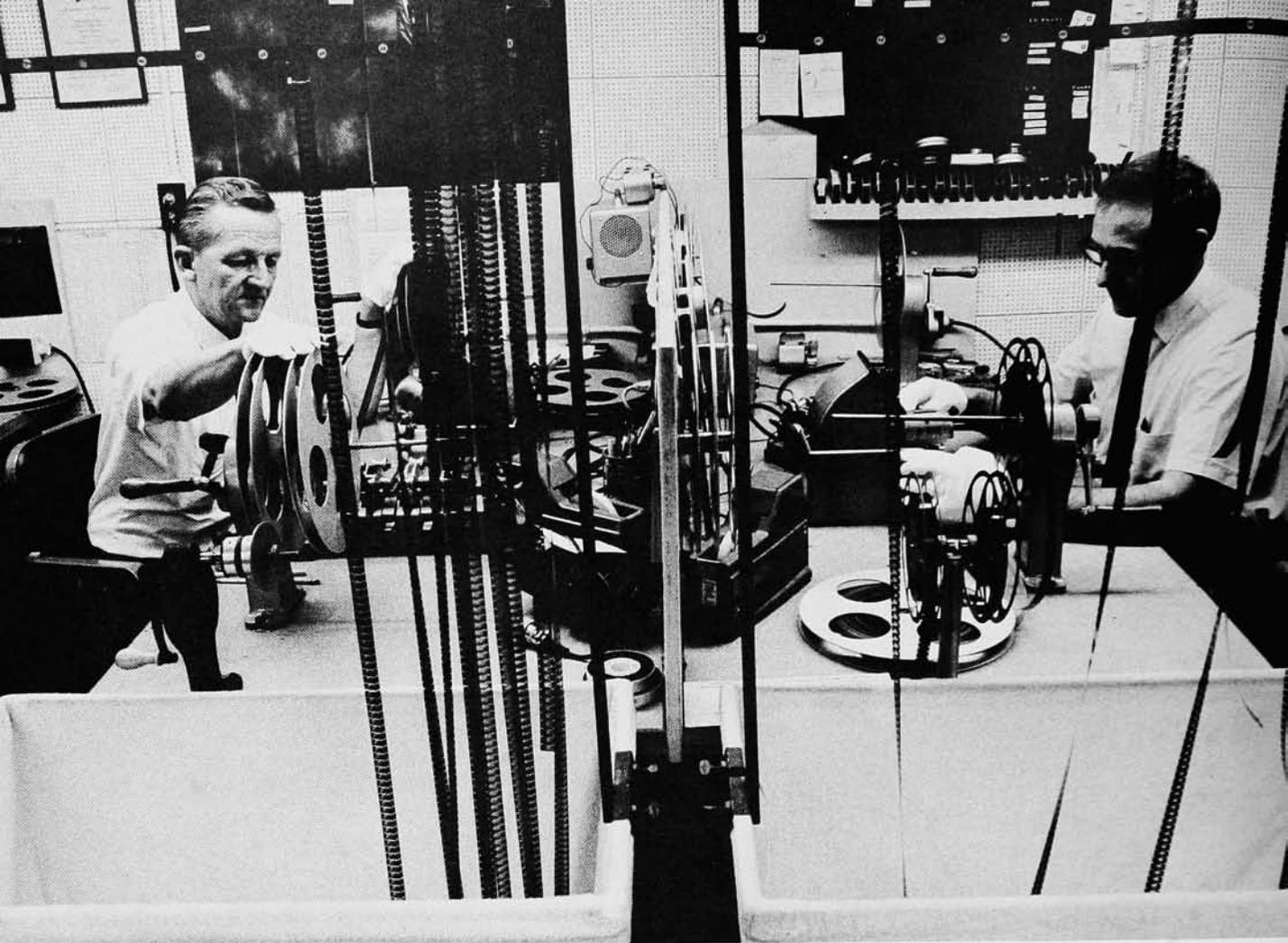


John Hsu, chairman of the Department of Music.

A schedule of all of these concerts is available to anyone requesting it from the Music Department Office in Lincoln Hall.

Probably the biggest news in classical music this semester, as far as Cornellians are concerned, is the visit of the Buffalo Philharmonic Orchestra to the Campus this month. The orchestra will be here for five days, from April 10-14, and will give two concerts during that time, one in conjunction with the Cornell Chorus and the Glee Club. While both of these concerts are part of the Blue Series and admission will be charged, the orchestra will hold open rehearsals every day at Bailey Hall, which will be free. And it is rumored that at some of these rehearsals, the University's own Karel Husa, who will be conducting, will don a portable microphone and explain and discuss the music to be played, much as Leonard Bernstein has done in his famous series of Young People's Concerts with the New York Philharmonic.

This particular event is merely another illustration of the fact that cultural music is probably more readily available to the student while he is at Cornell than it would be almost anywhere else. For this reason, if for no other, the student should not pass up the opportunity to sample some of the good music Cornell has to offer.



TEACH A MAN TO FISH

by RICHARD MARKHAM '68

"If you give a man a fish, you feed him for a day; if you teach a man to fish, you feed him for a lifetime." The TV-Film Center is teaching men to fish. In a variety of educational films as well as TV and radio programs, the Center is contributing to the welfare of the public. All such presentations are based on research that will be directly useful to the listener. It is the job of the Center "to interpret, translate, and transmit results of research being conducted by the colleges of Home Economics and Agriculture to the people of New York State," explained Professor James Lawrence, head of the TV-Radio Section in the Department of Communication Arts.

The TV and radio programs reach the public through the cooperation of 50 AM and FM stations comprising

the Cornell Radio Network and 28 TV stations located throughout New York State.

In the radio section, five five-minute programs are prepared each week for broadcast over CRN stations. Dave Nurmi, radio editor, produces all programs sent out to the radio stations. He is responsible for keeping abreast of new developments and information, finding topics of interest to the general public, arranging interviews and preparing programs.

A series on consumer education was prepared to help people with low incomes make the most of their money. Driver safety, tips on home improvement, the world food situation, and recent developments toward elimination of genetic diseases are only a few of the topics covered

in the past. A recent series, "Poverty in America," cites existing problems and goes on to present practical solutions to them.

The TV and film sections take up most of the space of the one-story building. As you walk out of the radio section, you find yourself standing in a completely equipped kitchen at one end of a large studio.

The work done in both the TV and film sections is produced on film. Talent for the films is not limited to professors. In fact, Garry Moore will do the narrating for an upcoming film and Bob Earle, Master of Ceremonies of the television show "College Bowl" and an Ithaca resident, has narrated and performed in several films.

Because of advances in the film industry, films of top professional quality are produced at the Center. Large, heavy lights have been replaced by small hand-held lights of equal candlepower. The development of film that can be used with available light has permitted the crew at the Center to go to locations previously unsuitable for filming. The new film and other innovations have eliminated the necessity of a large crew and provided maneuverability for the TV and film producers. Seventy-five per cent of the filming can now be done on location. When the studio is used, a permanent kitchen set is

available and other sets can be put up or taken down as needed.

As a sign of the Center's success, recent research studies show that the Center's TV films have a large audience for educational-type films and a high rating in terms of usefulness and quality. A dairy management course filmed for television attracted an audience of 2,000 farmers across New York State.

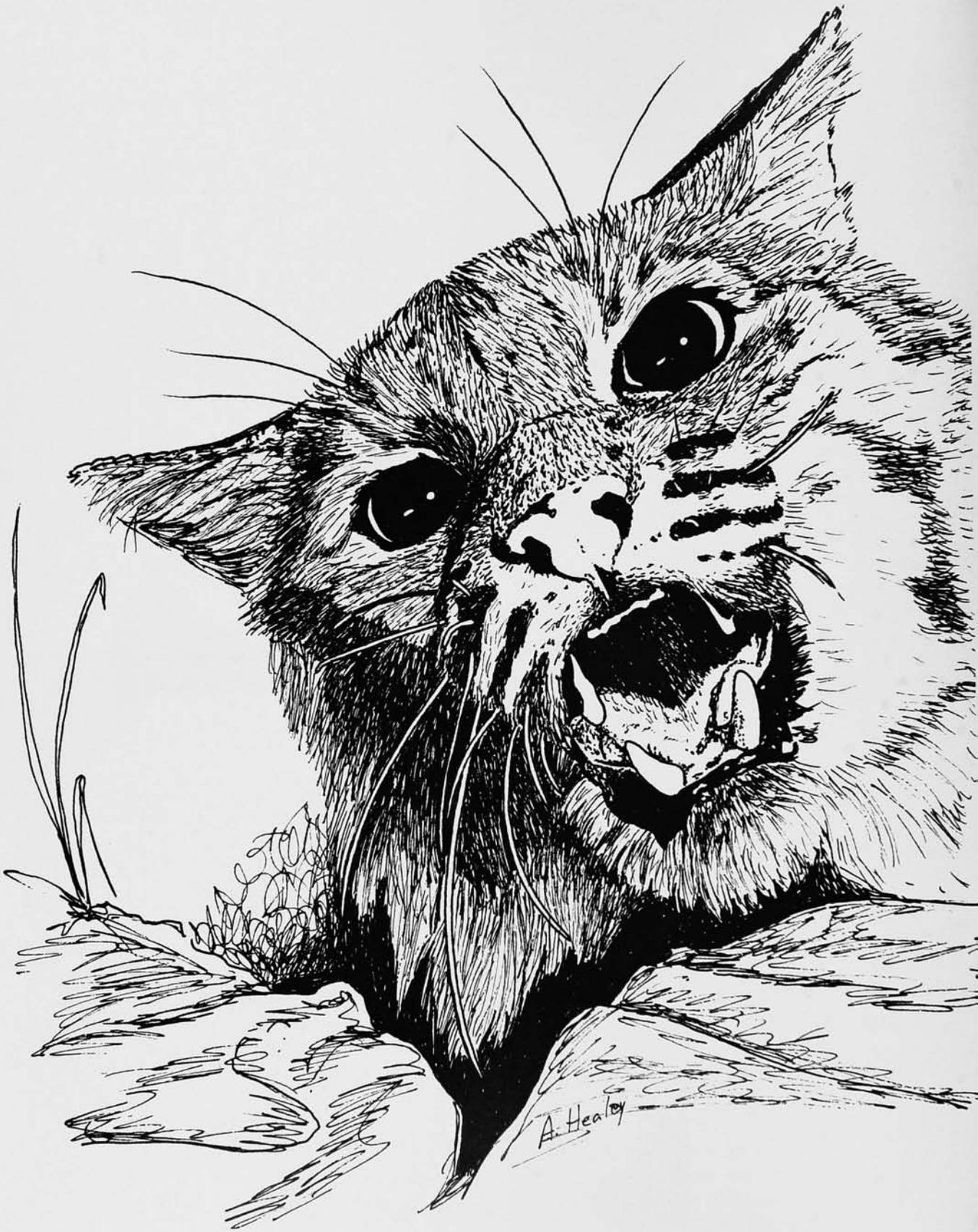
The films that are produced are developed from the educational objectives of the Colleges of Agriculture and Home Economics, as are the radio productions.

Considerable secondary use is made of the films after their initial exposure on television. They are used as teaching aids in training schools, as visual material for live television programs, for general audience viewing, at workshops, conferences, and also as reruns on television.

The Center exists for the dissemination of useful information. There is something about being engaged in the business of developing programs and films of benefit to the public that creates a personal involvement with the material being presented. The work at the Center is stimulating and immediate. Each new program or film is a first-hand encounter with new developments necessary to "Teach a Man to Fish."

The TV-Film Center maintains facilities and equipment necessary for production of high quality films. All of the editing and certain filming is done at the Center.







*To each was given life and thereby the right to live.
To some was given the ability
and thus the privilege to take away this gift.
But such privilege does not go unchecked.
The hawk, with swift flight and sharp claw,
cannot follow the mouse into its den,
nor can the cat fly after the jay.
Such limits reveal the conscience of nature.
Only one creature is not bound by this conscience.
To only one was given the power to reason
and thereby the power to follow the cat into its den
and the hawk into the sky.
We must judge the conscience of man
by the fate of the hawk and the cat.*

College for the Community

by JOE KELLEY '69

During an informal conversation about the war in Vietnam, a tuition-free educational institution was born. It may sound impossible, but Jack Goldman, a Cornell graduate student on leave of absence, and a small "working committee" of ambitious Cornell graduate students came up with an idea and made it a reality. They called it the Ithaca Neighborhood College (I.N.C.), and held the first classes this past fall.

On paper, I.N.C. would cause a realist to shake his head in disbelief. It is a free college, surviving completely on donations, unable to pay its teachers, with no building in which to conduct classes. In the eyes of Goldman and his working committee, however, the great potential of such an idea far outweighed the fear of possible defeat. They formulated a plan of action, and proceeded to carry it out.

The first step was to organize a "faculty." In this, they met with immediate success. Professors, graduate students, and teachers from Cornell, Ithaca College, and Ithaca High School volunteered to teach classes, which would be held in the evenings, Monday through Thurs-

day. Now there are almost 50 teachers, mostly professors, who are largely responsible for their own syllabi and construction of teaching materials.

When asked to donate classroom space, the City of Ithaca furnished rooms in DeWitt Junior High School, and Cornell volunteered laboratory space in Baker Lab. When asked to contribute funds for books and janitorial services, local people have been generous, as have the students who slip their purchase receipts into donation jars at the book stores. The receipts, worth 10 per cent of the amount of the purchase, are used to buy books for I.N.C. students who cannot afford to buy their own.

The 325 students who attend I.N.C. come from a variety of educational backgrounds, and the courses they take come from almost all fields of education. Many of the students are studying to pass high school equivalency tests, and some are working in preparation for college entrance tests. Vocationally oriented courses are popular among housewives, who are interested in very practical training that will give them more chances for better jobs. Baby-sitting arrangements can be made through the





college, so that busy mothers can attend the evening classes.

Arlene Korn, a Cornell undergraduate who teaches one of these vocational courses in the laboratory techniques of microbiology, explained how she tries to satisfy the students' quest for these practical aspects: "I always try to teach them what they will actually be doing as lab technicians, reminding them that they will have to remember this movement or that technique. Then we discuss the scientific reasons behind it. I think it's vital that lab technicians know why they are doing something. But, of course, I have to be careful not to bog the students down in too much scientific theory." Vocational courses in computer science and mechanics are also offered.

Among the 37 diverse courses are remedial reading programs, English for foreign students, and basic college-level courses in literature, the major foreign languages, and sociology. There are also general courses in politics and local and national government that are oriented toward giving a practical knowledge of how the government works. Budgeting and nutrition courses are offered for housewives.

The issue of testing is left entirely up to the teacher. Miss Korn feels that testing often wastes valuable time. She believes she has discovered a good alternative to tests. "Instead of giving them tests, I have organized review sessions to cover what we have discussed in previous classes. What this amounts to is that they do their homework in class. This works out very well because

most of my students are mothers who have little time for studying at home."

Grading, too, is left up to the instructor. Some teachers, for example those in English, grade compositions. But there are others who don't give grades, and in some courses the tests are optional. Obviously, the success of the courses depends to a large degree on the response of the students. And the response has been overwhelming.

About 50 people were expected at the two-week registration period last fall, but the committee was snowed under by almost 350 registrants. Goldman said the subsequent 50 per cent drop-out rate that left over 150 students still taking courses at the end of the term was actually "quite good" for a night school. "And we are doing even better this term," he said. If efforts to have the College accredited are successful, registration may get another boost.

Goldman said the year's expenses will total about \$5,000. He said I.N.C. received a grant of \$2,500 from a small foundation in New York City that is interested in experimental teaching.

Goldman was most pleased with the teacher response. "It's just wonderful," he says, "that they are so willing to give their time." And they have not only donated time. The greatest gift has been the enthusiastic offering of knowledge to the many members of this community who would otherwise be unable to receive the education they desire.

CANYON OF ETERNITY

by ANTHONY INGRAHAM '69

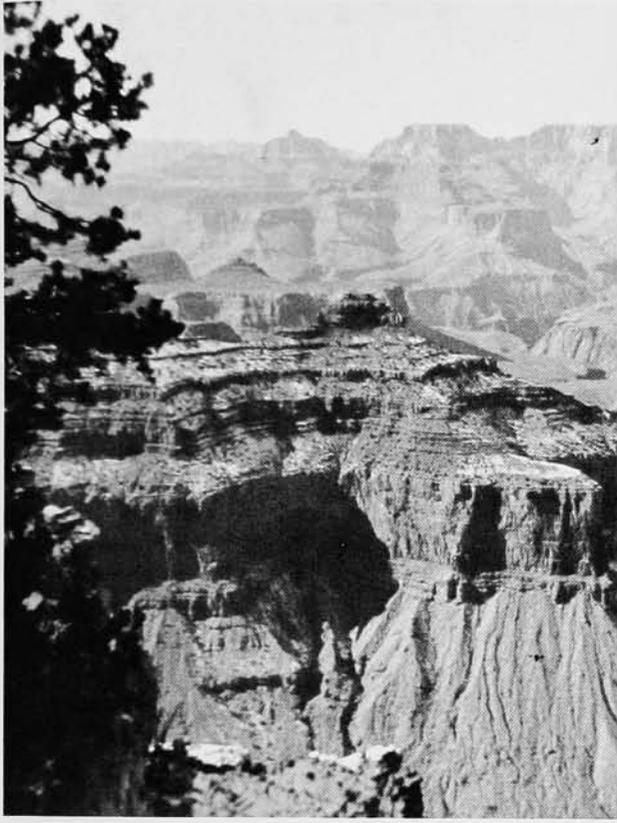
I was glad this year that Cornell lengthened its inter-session period. Last summer I spent three days at the Grand Canyon and sweltered in temperatures that rose to 116° F along the banks of the Colorado. I had decided then that I must return and see this spectacle in the winter. I left Ithaca at the start of inter-session for the Southwest. Reaching Flagstaff, Arizona, in two days; by the next morning I was preparing for the descent into the Canyon.

Walking the vertical mile into the Canyon's depths is more than a descent through space. It is a drop through a vast abyss in time as well. At the South Rim one stands on Kaibab Limestone, formed from sediments of a sea which covered the area during the late Permian Age of the Paleozoic Era. One passes down through the yellow rocks of the Coconino Sandstone, a fossilized sahara, into the river mud of the Hermit Shale, through

the Supai Formation, ancient flood plain deposits, into the thick sea deposits of the Redwall Limestone. Below are the rocks of the Tonto Plateau — sandstones, limestones, and shales of an ancient beach, where the earliest traces of animal life in the canyon are found.

Below the Tonto Plateau are the folded rocks of an ancient, deceased mountain range which trapped the clouds during the late Pre-Cambrian. And below them are the black, amorphous rocks of the Inner Gorge — the Vishnu Schist. The Canyon descends in steps 3,000 feet to the Tonto Plateau and makes a final plunge 1,500 feet to the Colorado River in this Inner Gorge. The rocks of the Inner Gorge are jagged and ominous. Here one feels the sensation of depth in time. The raging river tears at these rocks with the same fury that it has unleashed on the rocks above for millions of years. These black rocks are quite different from those found on the rim. They





are nearly two billion years old and are among the oldest rocks exposed on the earth.

The Inner Gorge is a strange place. With the Canyon walls rising thousands of feet around, one's ego is not only dwarfed, but hidden.

One is frequently reminded of the strange wildness of the Canyon. Somehow it is forbidden, inviolate. Man is an interloper on the landscape. The feeling is reflected by such names as "Haunted Canyon" or "Phantom Creek" but is best felt at night on the Tonto Plateau, when, in the still moonlight of the black masses of buttes and mesas all around, one is struck by the wailing laugh of the coyote. A band of them consort in the desert brush, carrying on business in which no man can participate.

The descent into the Canyon is travel in yet another dimension — climate. On this last week of January there was a foot of snow on the South Rim. The temperatures during the day were as high as the forties and fifties, but dropped to as low as zero at night. Snow followed us down to the Tonto Plateau, where it disappeared for good. The temperatures at the bottom rose to the sixties in the day and dropped to the thirties at night. Winter was on its way out at the river. The lizards were already emerging from hibernation.

The change in climate is accompanied by change in plant life. The South Rim is forested with Piñon and

Ponderosa pines and juniper trees. The Tonto Plateau is sparsely populated with typical desert plants — mesquite, blackbrush, Mormon tea, several kinds of cactus, and agave. At the bottom, tall, shady cottonwood trees prevail along the river bank.

During the final days of my stay I got to know the few people who live at the bottom of the Canyon. Phantom Ranch at the mouth of Bright Angel Creek accommodates guests who are hardy enough to take a mule down into the Canyon's depths. The Park Service maintains a ranger station there, and the Geological Survey maintains a hydrologist throughout the year to measure the flow of water and sediments in the river.

Roy Starkey, the hydrologist, lives in the Canyon. And it lives in him. It is his work and his love. He does not aspire to a lofty social position. The Canyon's walls are lofty enough for him. The Canyon is a place where he can be free. It will not curse him if he walks naked. It will accept him as he is. It asks for no more. A religious man once came down into the Canyon and authoritatively asked Roy if he went to church and believed in God and the Gospel. Roy said no. He pointed up to the Canyon walls and to the river and the trees, and said confidently, "I got my god right here."

I had walked a hundred miles in the Grand Canyon. I climbed the trails on its walls twice, explored the Tonto Plateau, walked far up the wild side canyons, and followed the banks of the Colorado River. But after nine days, I began to realize just how little I had seen. The miles I'd walked were but timid probes into the Canyon. Dozens of side canyons, some as yet unexplored, mesas, temples, and hundreds of miles of river never came into my view, and probably never will. The Canyon is too big and I too small.

The Canyon is supreme. And yet even it is a thin veneer over the forces that built it: the weather system that keeps the climate dry; the huge blocks of the earth's crust beneath the layers of the Canyon's walls that break and shift the relatively thin (though a mile thick) rocks above to conform to their placement; and the great forces of diastrophism that lifted this land eight thousand feet and spewed lava over it, leaving volcanoes two-and-a-half miles high. And all this in a few million years, but a flicker in the candle of time.

To man the Grand Canyon is everlasting. It was here long before men learned to stand upright and it will be here long after us. The dams that try to steal strength from its waters will vanish and the river will flow as it has for millions of years.

The Grand Canyon does not tell me I am a Cornell student. It tells me that I am a human being, a speck of dust in the universe with time and space radiating from me infinitely. The Canyon is a deep gash in the earth, the earth that I can't ignore when I stand on the South Rim.

COUNTRYMAN CAPSULES

Prof. Edward A. Lutz of the Department of Agricultural Economics has been named a Fulbright research scholar. A specialist in local government and finance, he will spend a year in Norway beginning in September, 1968.

A major part of his work will involve investigation of the recent legislation aimed at the consolidation of Norway's local governments. While in Norway, Lutz will be associated with the Royal Agricultural College of Norway. In addition, research will be conducted at the University of Oslo. Prof. Lutz will return to Cornell in July, 1969.



The Department of Communication Arts has gained a new associate professor. Victor R. Stephen, a visual communicator and artist, joined the staff of the Colleges of Agriculture and Home Economics on March 1. He was formerly on the faculty of the University of Illinois where he taught communication courses and was in charge of the Division of Visual Services of the Office of Agricultural Communications in the College of Agriculture.

Next fall, Prof. Stephen will give a course in visual communication. During the spring term, he will teach a course on the art of publication. In addition to this, he will assist in the development of visual communications programs.

Prof. Stephen is no newcomer to Cornell. From 1947-1955, he worked as publications production manager here, also serving one year in Turrialba, Costa Rica, as visual consultant to the Inter-American Institute of Agricultural Sciences.

During the last days of March, almost 5,000 high school students attended lectures at the College of Agriculture. Programs were offered in both science and agriculture in order to give the students a broader knowledge of the physical, social, and biological sciences. The programs were also planned to acquaint the visitors with the various career opportunities available in the scientific and agricultural fields.

Each science student attended two lectures and four demonstrations. Agricultural students attended three lectures, and toured points of interest in and around Cornell.

The lectures and demonstrations were given by staff members of Cornell's physics department, the N.Y. State Veterinary College, and the Colleges of Agriculture and Home Economics.



The National Association for Research and Science Teaching has elected a new president. He is Prof. Joseph D. Novak of the Department of Education.

The Association is composed of science teachers and administrators from all levels of education.

In addition to his new post, Prof. Novak is chairman of the division of science education in the Department of Education. He was appointed to this position in 1967.

In the past, he has served as president of the Association of Midwestern Biology Teachers, and is a member of the National Science Teachers Association, and the American Association for the Advancement of Science.

Twice each year, the Guldin Award Committee chooses three undergraduates to receive its awards for excellence. These awards are presented to the writers, who in the opinion of the committee have prepared the best articles printed in the *Cornell Countryman* during the preceding term.

In addition to the honor, the three recipients are presented with a cash award. First place receives 75 dollars; second, 50 dollars; and third, 25 dollars. This year, Tamar Asedo '69 won first place for her article, "Politics and Protest — Past and Present." Second and third places were given to Bradley J. Berthold '68, and Mary Jane Ferguson '68, for their articles, "Veteran Vietnam Volunteer," and "The Country's City Children."

In addition, the committee chose to recognize the general excellence of certain articles through the category of honorable mention.

First honorable mention was awarded to James Oliphant '68, for his article "Developing the Underdeveloped: A Beginning." Second honorable mention went to Joe Kelley '69, for "From the Minstrels to the Mikado." And Third honorable mention was given to Greg Pogson '69, for his article entitled "North to the Future."

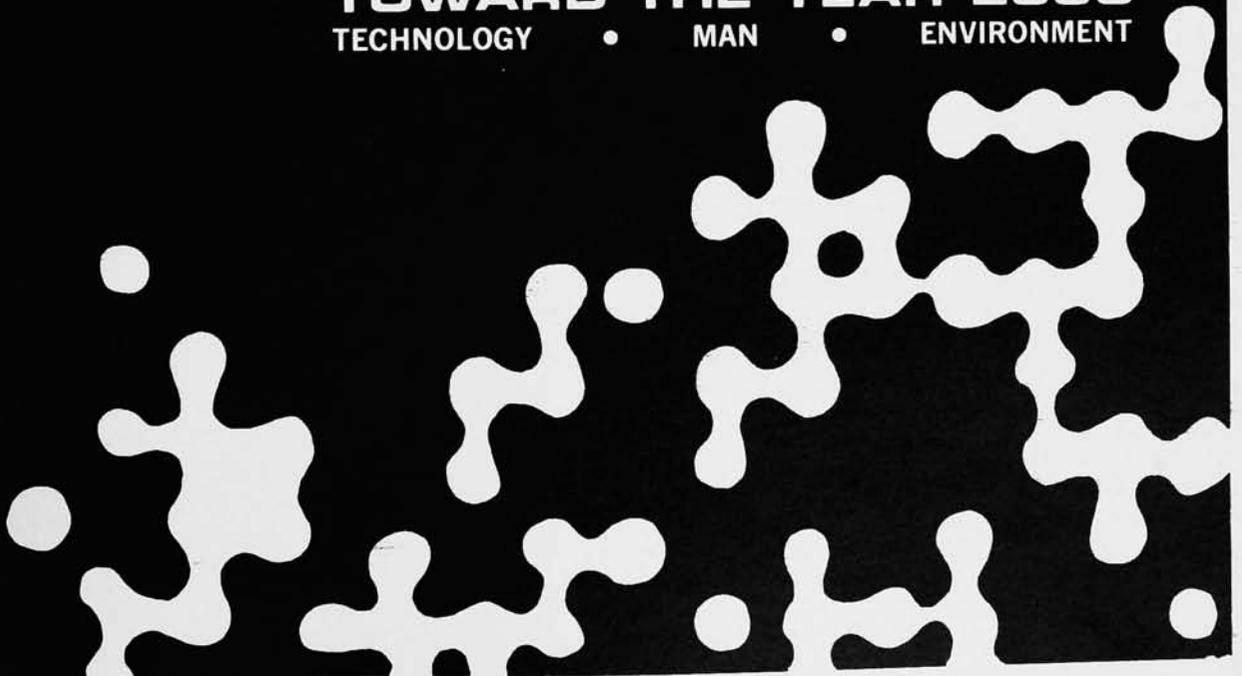
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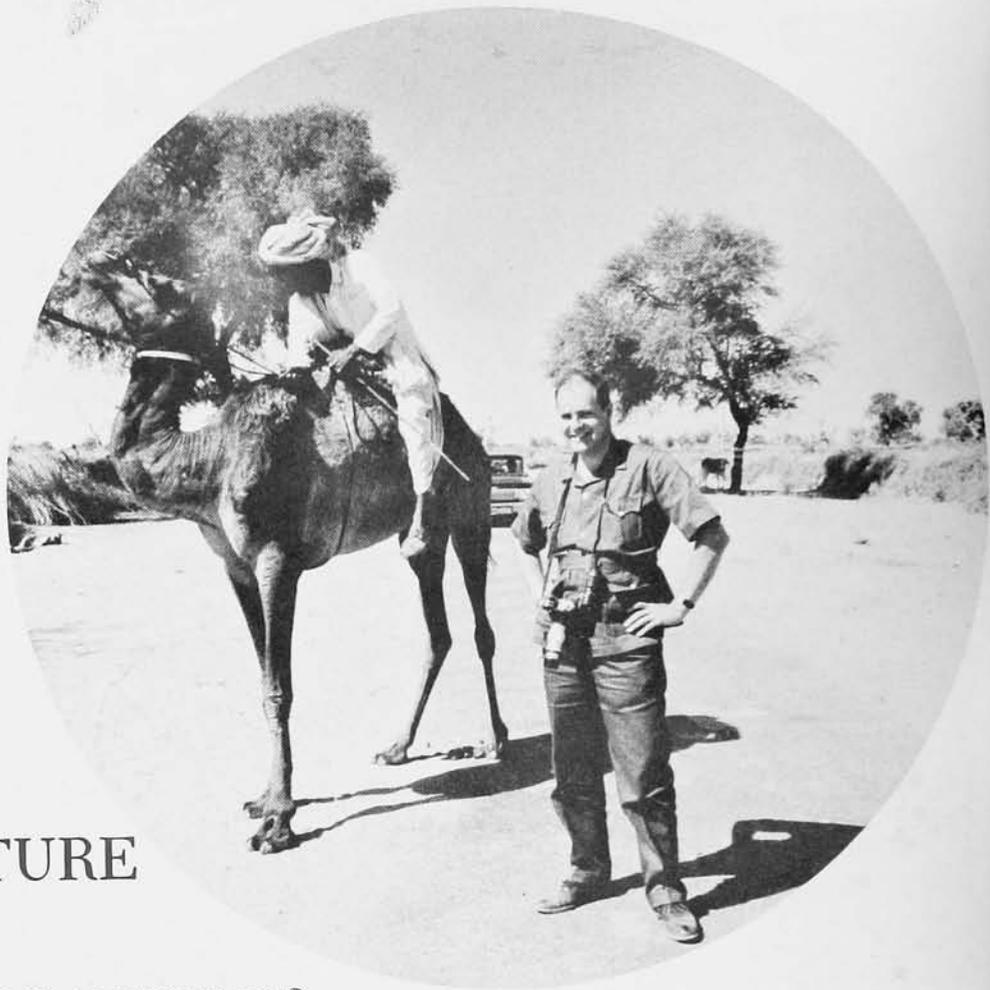
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TOWARD THE YEAR 2000
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WHY THE COLLEGE OF AGRICULTURE FOR COMMUNICATIONS?



Ask Foreign Correspondent Arthur J. Dommen '55.

Enroll an American born in Mexico City in the New York State College of Agriculture. Direct him toward courses in communication arts. Give him an opportunity to sharpen his writing skills through experience on the *Cornell Countryman*. Blend in the diversity of a Cornell education. Graduate him, then sit back and watch things happen.

Dommen's first job as a reporter was with United Press International. UPI soon promoted him to Saigon Bureau Manager, then to Hong Kong Bureau Manager. From there he joined the *Los Angeles Times* as correspondent for

Japan, Korea, and Okinawa. Now living in New Delhi, India, Dommen is the *Los Angeles Times* correspondent for South Asia. Based on his experiences in this area, he has written his first book, *Conflict in Laos: The Politics of Neutralization*.

This may seem far from the New York State College of Agriculture, but it was here that Art Dommen and others like him gained the knowledge and skills necessary for an active participation in world affairs. Today's College of Agriculture student has even greater opportunities awaiting him.

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CORNELL COUNTRYMAN

VOL. LXV

MAY, 1968

NO. 8



ON THE COVER

Graduation and the future lie ahead for seniors, to whom Libe Tower will recall many memories. The Tower houses the Cornell Chimes which are a century old this year. See article, page 8.

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CORNELL COUNTRYMAN

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Research on the Rhesus

by JIM OLIPHANT '68

"Leave the kid alone, can't you see he's scared," are the cries of *Macaca mulatta* as the scientist carries another little fellow to the testing cage.

At least this is what Charles B. Greyson, a senior majoring in psychology, believes he hears as he studies another rhesus monkey.

Since last October, Charles has been conducting independent research at the Howard S. Lidell Laboratory of Comparative and Physiological Psychology at Cornell University. He is working on an original project which he planned while taking Psychology 462, Advanced Learning, last fall under Professor Fred Stollnitz.

"In our study and discussions," notes Charles, "we were making generalizations concerning the different learning rates between rats and monkeys. The results of previous training and learning tests, by numerous researchers, indicated that monkeys could learn more intricate problems at a faster rate."

One of these experiments concerns the overlearning reversal effect. As Charles explains it, "The overlearning reversal effect is a decrease in the amount of time it takes an animal to relearn the reverse of a specific task already learned."

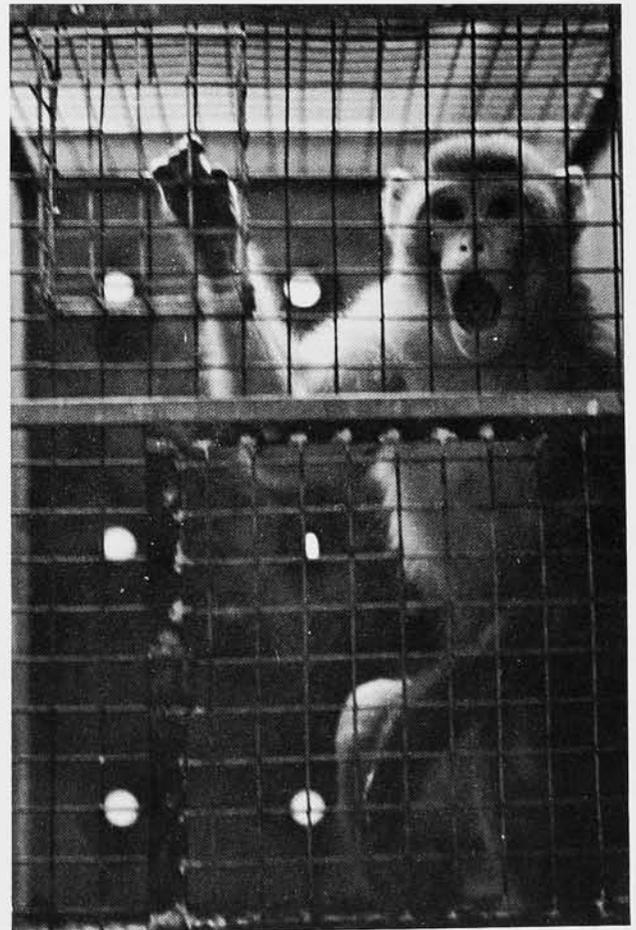
For example, suppose a scientist teaches a monkey how to find raisins. The scientist places a raisin under a black square and the little fellow learns the trick of picking up the right square and finding a reward. The scientist continues to place the raisin under a black square after the monkey has learned the task and rewards the monkey for at least twenty more trials. This is overlearning.

Then the reversal effect begins as this time the raisin is placed under a white circle. The scientist then counts the number of trials necessary for the monkey to learn that the raisin is not under the black square but beneath a totally different object. A decrease in length of time it takes for the monkey to relearn where the raisin is is the overlearning reversal effect.

This effect was first demonstrated 15 years ago with albino rats. Since that time, the phenomenon has been reproduced and analyzed in dozens of studies on subjects ranging from the octopus to man.

However, all experiments to produce the overlearning reversal effect on monkeys have failed leaving most investigators today believing that this effect does not occur in the species. Charles, however, believed that an overlearning reversal effect could be obtained. His first step

Roger, the sophisticated rhesus.



was to analyze where scientists went wrong in their previous research.

He discovered that in previous experiments on monkeys, the cues or tests that the animal had to overcome for a reward were ones which were too easily learned. As Charles explains, "The cues were those to which the monkey had a high probability of attending." In addition, the monkeys used in previous experiments were adults. Charles explains, "They were too sophisticated or too 'intelligent' to have to go through the laborious task of relearning an old trick." In other words, if a raisin were placed under a black square instead of a white square, they would learn to pick the black square so quickly (without overlearning) that investigators thought an overlearning reversal effect just didn't exist.

Charles had to devise an experiment that eliminated the "sophisticated monkey" problem and demonstrated that an overlearning reversal effect actually was obtainable in the rhesus monkey.

The subjects for Charles' experiment were 25 young, 11 to 31-month-old rhesus monkeys. For the overlearning effect, all the monkeys were trained to remove a black square, as opposed to a white square, and receive a raisin as a reward.

But the stumbling block, the supposed high "sophistication" or "intelligence" of the monkey had to be overcome. Hence, Charles added an additional phase of learning to the overlearning or training process. Charles notes, "Not only did a monkey have to distinguish the right color for a reward, he also had to distinguish the correct form of an object." To find a raisin under a black square wasn't enough. Now the monkey had to learn that the reward lay under a specifically colored square or triangle or circle.

"At first," observed Charles, "before the additional learning factor — that of distinguishing form — was introduced, the monkeys behaved like geniuses." One of the monkeys, nicknamed Roger, not only learned that a raisin was under the black square, as opposed to a white square, but also that if he took the square into the testing cage he could get ten, maybe fifteen raisins as a plea by Charles for him to give the black square back.

"But when the new element of learning was introduced," continues Charles, "the testing group, including Roger, calmed down." The monkeys now had to learn a specific task in order to get a raisin.

Once the overlearning or training phase was accomplished, Charles attempted the reversal effect — a reversal of learning. Instead of the raisins being under a black triangle, the raisin was placed under a white triangle. The objective was to discover an overlearning reversal effect — a decrease in the time required to learn the reverse of a problem already learned.

Charles' experiment is not yet finished, but the prelim-

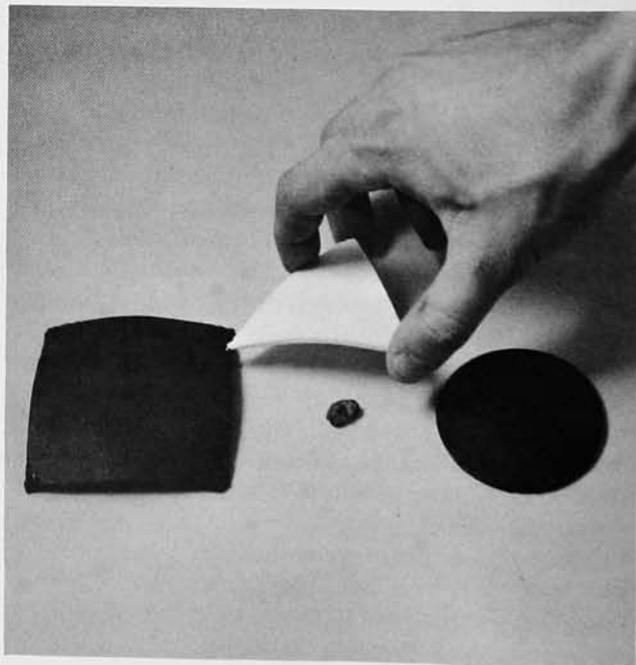
inary results are positive; he has discovered that an overlearning reversal effect in rhesus monkeys does exist. He states, "When rhesus monkeys are overtrained past a point where they know something, and a reversal, or reteaching takes place, the effect is that the reversal or reteaching is easier to learn."

Previous experiments had failed to show this phenomenon in the rhesus monkey. But Charles, after six months of independent research, is proving his hypothesis to be true.

Because of his originality and conscientious scientific study, Charles has been asked by Professor Stollnitz to present his research to the American Psychology Association in San Francisco this September. Charles also plans to have his results published in a nationally distributed psychology journal.

Next fall, Charles will attend Upstate Medical School in Syracuse. In thinking about his four years of study at Cornell, he considers his independent psychology research the highlight of his academic career. He notes, "The little rhesus monkey proved to be a good friend and an excellent student. He even taught me the value of conscientious scientific experimentation which undoubtedly will be of great help to me throughout my medical career."

In Charles Greyson's experiment, different-shaped objects were the key to proving his hypothesis — that an overlearning reversal effect was obtainable in the rhesus monkey.





Rugby – A Ruffians' Game

by JAMES POGGI '71

The Cornell Rugby Club, which is not a university-sponsored team, dedicates its spare hours to "a ruffians' game played by gentlemen." The sport, which originated at an English prep school named Rugby, was introduced to Cornell about 25 years ago. However, it has been played in earnest for only about five years. Since then, the team has developed considerably and now, in its spring and fall seasons, plays some of the finest rugby teams and clubs in the East. Last fall, the Rugby Club compiled a three win and two loss record, defeating the Rochester Rugby Club and the New York Rugby Club, considered by some to be the best in the East.

The Club's schedule this spring has included a tournament with Union, Columbia, and Colgate which it hosted April 27-28 and for the second year in a row, a trip to Jamaica over Spring Vacation. To help out the effort the club held a raffle for a trip for two to Jamaica. The money they made helped pay for new uniforms, which the club must buy for itself since it is unsponsored.

The club plays most of its games at home, on Saturday afternoons, on Upper Alumni Field. To the casual spectator, the game of rugby may at first seem similar to football. And like football, the ball is carried rather than kicked, as it is in soccer. Rugby is played on a field of approximately the same dimensions as a football field. The ball looks much like a football, except for the fact that it is shorter and rounder. The object is the same: to

get the ball from one end of the field to the end of the opposing team.

However, there are also many differences. The most apparent deviation from football is that rugby players use almost no equipment — no spikes, hard helmets, or various bits of padding are allowed. Furthermore, the ball is forfeited on every tackle, making the time between successive scores, or "trys," generally much greater than in football.

A try, touching the ball down behind the opponent's goal, is worth three points. After a try is made, a conversion, in which the ball must be kicked through a pair of uprights, may be attempted. If successful, the conversion is worth two points.

Each team is composed of fifteen players, eight forwards and seven backs. During the game, after an accidental penalty such as an inadvertent forward pass, the eight forwards from each team line up in a "scrum." Shoulder to shoulder, in a circle facing each other, the forwards vie for possession of the ball.

During a rugby game few, if any, personal fouls occur. At the conclusion of each game, each team groups together to cheer the other. Once the game is completed, the Cornell Rugby Club plays host to their opponents at a local tavern, which serves as their "headquarters." Rugby is a game of wide appeal where fellowship and gentlemanly conduct on the field are highly valued.

Educating Technical Writers

by GARY FISHER '70

Editor's Note: This article represents the views of a former biological science major now in the Department of Communication Arts.

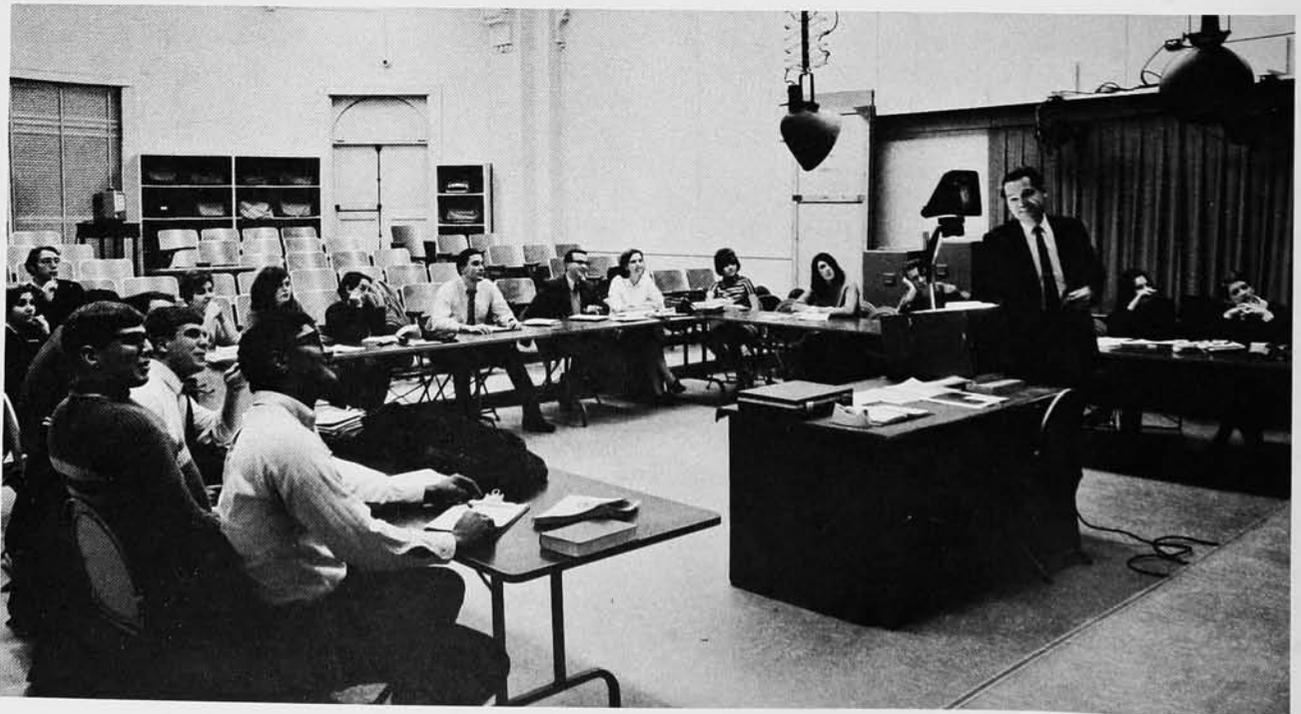
To be sure, ours is a technical age and a rapidly advancing one at that. Frequent reports of exciting wonder drug discoveries, ingenious isotopic tracer experiments in agricultural science, and rapidly advancing medical technology drive this fact home to us daily. From government laboratories and research centers across the country has come an incessant stream of experimental results and their projected applications to natural and industrial science, of new findings in the world of medicine that shed light on the causes and contagion of disease, and of new physical theories concerning the nature of matter and energy. From the printing press have come thousands upon thousands of manuals, lab reports and textbooks designed to keep the layman abreast of the latest scientific developments, to instruct other professionals in putting new findings to optimal use and, of course, to educate and inform the undergraduate and graduate scientists who will lead technological advance-

ment in their own time. Essential to each of these publications and so very important in all phases of science is the technical writer.

Several years ago the typical science writer or editor had a background of journalism and grammar and, to a much lesser extent, some study in undergraduate science courses, although a number of writers had pursued master's or doctoral degrees before actually starting their writing careers. All too often, though, people enter the technical writing field not of their own volition but rather because of the pressures put on them by others in their particular organization, people who recognize the need for and scarcity of capable science writers. Such forced promotions of scientists from the laboratory desk to the typewriter have yielded, at best, haphazard results.

The field of technical writing presents a panorama of challenges to the prospective author, for he has, in essence, been commissioned to tell someone else's story. He must relate it in a way satisfactory to the engineering department, the public relations department, the

Dr. Robert Crawford teaches Communication Arts 316, a course in science writing at Cornell.



technical editor, and the U.S. government. Working within this stringent framework, though, he must also interject originality, color, and a sense of excitement into his writings. This type of writing is a form of art in itself and should be looked upon as such. To be sure it would certainly suit the scientific world's interests to propose and initiate undergraduate technical programs for science writers — programs commensurate with the demands placed upon today's technical writers.

Although many colleges offer major courses of study in journalism and communication arts few, if any, have ever put together any sort of planned program for the prospective technical writer. Although a number of science writing courses are available in colleges and universities across the country, i.e. Communication Arts 316 here at Cornell, these can hardly provide the beginner with the fundamentals he will need. The prospective technical writer should encounter mathematics, science, English, literature, and language in his undergraduate work. Ideally the science writer should be exposed to mathematics at many of the precalculus levels, such as plane geometry, logic, and advanced algebra. While he probably will never use the knowledge gained in these pursuits, the technical writer or reporter should indeed have at least a cursory acquaintance with mathematics and its applications. To deny him this is to render him blind to the scientist's most powerful instrument.

A course or two in literature should also be included in any science writer's undergraduate program. It might be advantageous to spend one full semester of such a course in studying one author by himself. Such a directed study would almost certainly develop an awareness of style in the writer and would help him to sense that there is a "right" phrase for a right time. In addition, the prospective technical writer should follow a number of courses in English and the humanities. Should his background in high school grammar be deficient, he should enroll in a college-level grammar course, if one is available; the drudgery of analyzing and diagramming sentences will reap benefits commensurate with his efforts when the student actually starts to write. Contrary to what most people think, it really shouldn't be necessary for the undergraduate technical writer to pursue a great number of magazine, movie, and journalism courses. By taking a serious and conscientious view toward his writing style in term papers and reports for history, psychology, and sociology, the student can often obtain the necessary practice while he is also broadening his scope from the content of such compositions. As a matter of fact, many technical writers have completely bypassed training in the field and present to their employers only a solid background in English and literature. To be sure, many English majors turn to the field only after discovering that their first novel has not set the literary world ablaze.

The technical writer should, naturally enough, place a great deal of emphasis on science and science-oriented courses. The ideal curriculum should include introductory survey courses in biology, biochemistry, chemistry, and physics. While a laboratory class will allow the prospective writer to observe first hand the experimental techniques which result in new findings, classroom demonstrations and lectures might just prove to be more important because it is here that the student can develop an appreciation for the findings and writings of others before him.

Such an undergraduate program, offering a liberal choice of electives while still focusing all courses toward the immediate end of technical writing, would certainly serve the student well. Of course, many excellent technical writers now hold prominent positions without having followed any sort of prescribed course. For indeed the college degree holds no magical powers nor does it necessarily represent a summation of the holder's aptitudes and abilities. It merely measures the amount of training the student has had in a certain field, and its true value lies therein. The vital field of scientific writing is understaffed and it is up to our colleges and universities to rectify the situation.

A background in science is a valuable asset to the technical writer.



Rumor has it that Cornell faculty members in the late 1800's were accustomed to assemble every morning before breakfast and dance a hornpipe to the music of the chimes. It is doubtful whether even the most energetic faculty member would attempt this today, but the chimes of Cornell still ring out their diverse melodies with lilt-ing spirit.

For nearly a century the chimes have been an integral part of campus life. The first nine bells were donated by Miss Jennie McGraw, daughter of Cornell Trustee John McGraw. One September morning in 1868, Miss McGraw met President Andrew Dickson White in the small library which Ezra Cornell had founded in Ithaca. He answered her questions and showed her around the campus. The next day, word reached the President that she had decided to make a gift to Cornell. Advised by Judge T. M. Finch that chimes would be appropriate, she immediately commissioned a set of bells to be made. Only one difficulty stood in the way; there were just two weeks left before the formal opening of the University. The order for the bells was rushed to the Meneely Foundry in Watervliet near Troy, New York. On the

afternoon of October 7, 1868, the bells, which had been placed in a temporary wooden tower, were rung for the first time.

Legend states that the "Cornell Changes," better known as the "Jennie McGraw Rag," was played on this occasion and has been played every day since. Some believe the tune was written by Miss McGraw, but it was actually composed by Jennie's brother-in-law, William Orville Fiske, in 1869 at the request of President White.

In 1869, Mary A. White, wife of Cornell's President, presented a tenth bell which weighed 5,000 pounds and came to be called Magna Maria. The bells were moved from their temporary wooden home and placed in the tower of McGraw Hall in 1872. In 1875, a clock donated by John McGraw was installed to ring the quarter-hour chimes automatically. In the past, chimesmasters had to run up to McGraw Hall tower to ring the bells by hand to indicate the time. With the new automatic device, the time chimes would ring themselves.

In 1891, Uris Library and McGraw Tower were constructed and the present chimes and clock from McGraw Hall tower were moved here. This tower is 173 feet high, and the chimes at the top may be reached only by climbing the 162 steps.

In 1908, all of the bells were recast except two, the Magna Maria and the largest of the bells Jennie had donated. Four new bells were added at this time, bringing the total number of bells to fourteen. A new playing stand and two new bells were added in 1928, and the last two in 1939. In 1957, the old clock was disconnected and an IBM automatic control installed to ring quarter-hour chimes.

A number of stories and legends have grown up around the chimes. One interesting story involved President White. In July 1875, Cornell astounded the world by winning both the varsity and freshman crew races in the intercollegiate regatta at Saratoga. A great deal of excitement was generated on the Cornell campus. According to the legend, when the telegram of victory arrived, President White rushed to McGraw Tower, broke open the lock on the chime levers, and rang the victory chimes himself.

A Mr. Ogilvie who was chimesmaster in 1950 adds this tale. On May 1, 1950, the chimesmasters observed May Day in a big way. The night before, red cellophane was used to cover the inside of the clock face so that all night the clock had a rather fiery glow. Then, on



f Chimes

by MARYA DALRYMPLE '70

May Day morning, the usual program was played at 6:50 instead of 7:50. The program included all of the tunes associated with international Communism. It was reported that many students pounded on the doors of Willard Straight cafeteria wondering why they couldn't get in — an hour early. The chimesmasters were all asked to report to the Proctor that afternoon. They were informed that the red color in the clock face could have caused a fire alarm unnecessarily and were scolded about changing the program schedule. As far as it is known, no one recognized and associated the red color with the day.

Even today the chimes see their share of Cornell humor and activity. On Fall Weekend this year students seeking to know the time stared up at two immense white Mickey Mouse hands pointing out the numerals. On Halloween the clock faces gleam an eerie orange and the bells chime thirteen unharmonious bongs at midnight. Special concerts are played to honor athletic victories. Since the music played on the chimes generally reflects the mood of the chimesmaster, it is not unusual to hear such contemporary pieces as the Fugs' "Slum Goddess from the Lower East Side" or any of the Beatles' tunes resounding loudly from the Tower.

In their hundred years of existence, the chimes have been played by approximately 225 people. Each year freshmen may compete for positions as chimesmasters. Their training begins in February and continues until spring. They must memorize the "Rag" and "Evening Song" and transcribe a work of their choice to be played in competitive concert.

Originally there was only one chimesmaster who played two concerts daily, but gradually the number of chimesmasters has increased to about six a year. Since 1943, women have also had the privilege of holding this position; three girls are presently playing. Because of the weight of the bells (2½ tons for the largest), the weight of the wood in the handles on the playing stand, and the complexity of the chain connections to the bells, the Cornell Chimes is one of the world's most arduous instruments to play. Yet ringing the chimes has never been considered work, as any chimesmaster (or mistress) will tell you.

McGraw Tower, or "Libe Tower" as it is more popularly known, has been the symbol of Cornell for many years. It is a well known landmark as it welcomes Cornellians to Ithaca. An average of 3,000 persons a year

from all over the world visit the tower to watch the chimesmasters and look out over the campus and Cayuga Lake. Special open houses are held occasionally with refreshments and requested programs played all day. This spring one was held on Parents Weekend and 800 parents and students climbed the winding staircase.

October 7, 1968, will mark the hundredth anniversary of the chimes of Cornell. In commemoration, a celebration will be held preceded by the installation of a new playing stand and a general restoration of the tower. It is hoped that new gilded hands, numerals, and faces on the clock will beautify the structure, and that a chimes museum will be established. It is also hoped that former chimesmasters and chime lovers will return to enjoy the centennial. In honor of the celebration, a book, *The Cornell Chimes: A Centennial History*, is being written by Larry Kerecman, Engineering '69.

The Cornell Chimes are an integral and traditional part of Cornell life. For a hundred years the bells have pealed their cheery and raucously individual repertoire over the campus, and they will continue to ring as long as there is a Cornell.



Preserving Agricultural Land

by JOE KELLEY '69

Since the turn of the century more than half of the farm land in New York State has dropped out of agricultural production. The number of farmers has decreased by seventy-five per cent. These changes have been due partially to the modernization of agriculture, but lack of planning on the part of sprawling urban centers is another important, even threatening, factor. With careful planning, however, enough good land can be preserved for farming without sacrificing the land necessary for urban growth.

It was with this objective that the Commission on the Preservation of Agricultural Land in New York State was created. Governor Nelson A. Rockefeller spoke of forming such a commission at the Agricultural Leader's Forum at Cornell in 1966, and did so soon after. The Commission has recently submitted recommendations designed to preserve agricultural land in the State.

The first of these recommendations calls for agricultural considerations to be included in the planning processes at all levels of state government. An example of how this idea is put into effect is the recent cooperation between the Department of Transportation and the Department of Agriculture. Since agriculturists will have a say in the planning of highways, the destruction of good farm land by road construction will be prevented.

Recommendation I also provides for the creation of an independent agricultural resources commission, that would be connected with the Department of Agriculture. This commission would deal with the ultimate problem of preservation: deciding how and where to retain agricultural land. Since such a small portion of the population is made up of farmers, the agricultural viewpoint is necessarily under-represented in the state government. This would be somewhat remedied by the resources commission, which would include private citizens from the major divisions of the State's agriculture industry.

The major task of the resources commission would be to help develop ways to draw urban development away

from good farm lands. One proposed method of actually directing the flow of urban growth is providing such services as electricity and water in those areas that are undeveloped residentially, and that are not worth saving agriculturally. These services would be provided even before the construction of homes began, so that home builders would be attracted to these regions. Guidance would be offered to the utility districts (water, light), suggesting where they should and should not provide this preservice.

Recommendation II states that the taxation of new farm real estate improvements should be deferred for five years. This would curb one of the major causes of farm land loss near urban centers. Farmers hesitate to invest in their farms when they see the possibility of future demand by city dwellers for their land. This not only reduces the productivity of the land during the intervening years before the actual sale to the city, but, since productivity is reduced, it increases the tendency of the farmer to sell. This inadequate care of the land also makes it less attractive as a countryside for the people who eventually build homes there.

The third recommendation seeks a provision for creating zones in which agriculture would have priority over other uses. Up to now, agricultural zones have been very low on the zone selection pyramid. Selection of zones for residential, commercial, and industrial purposes has come first; the remaining land is then allotted to agriculture. Thus, the present method of zoning tends to discourage major investments in new farm structures and land improvements.

Recommendation IV requests consideration by the legislature of provisions that would create prime agricultural districts. These districts would be safety areas where those laws that often enable local governments to gain control of farm land for residential purposes would be modified, or could not be enforced.

Recommendation V calls for more effective manage-

ment of the State's water resources, and further development of irrigation. Full utilization of the Barge Canal for irrigation could double yields on some of the best farm land. For this reason, the Commission recommends that no further consideration be given to transferring the Canal to the Federal Government.

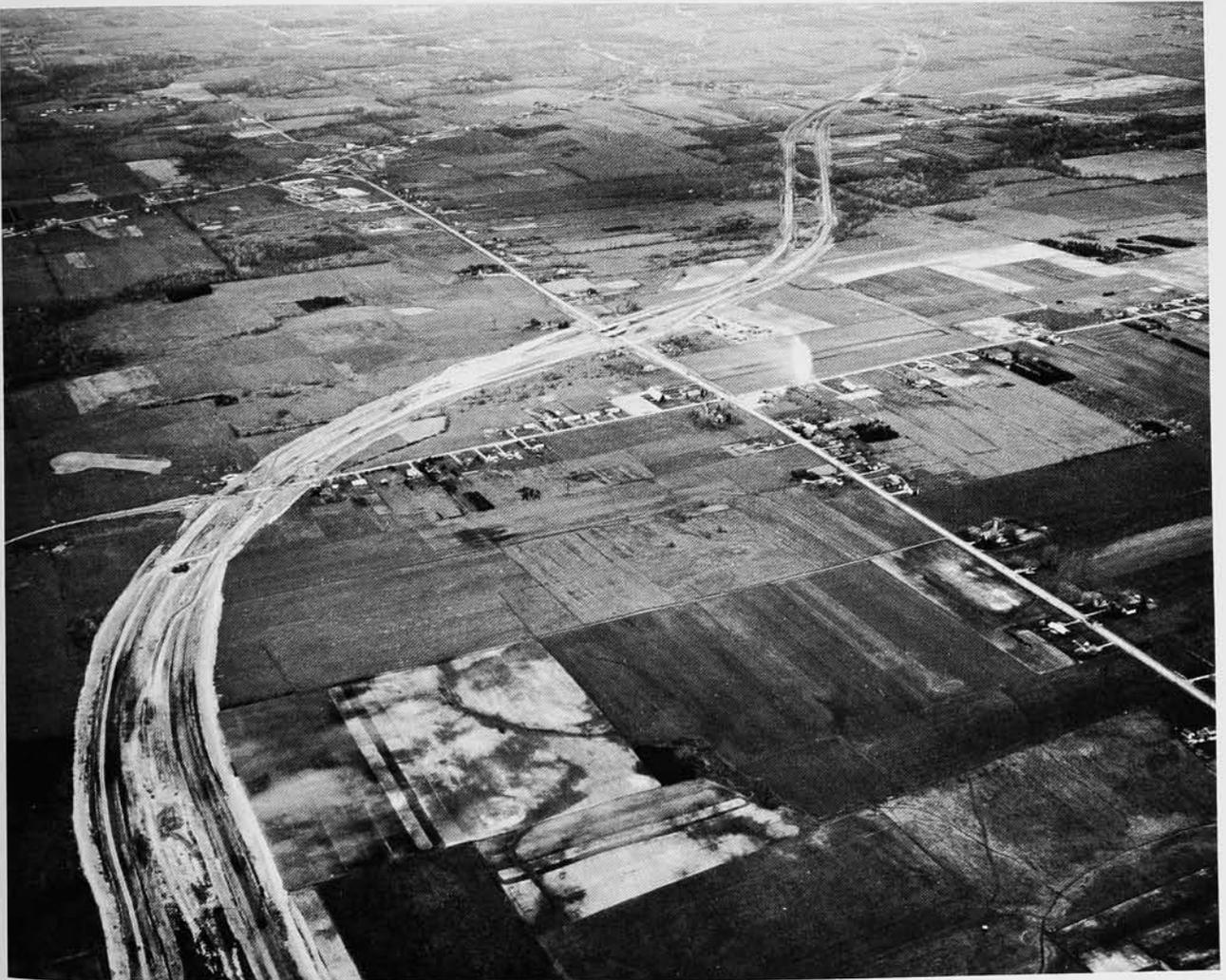
The last recommendation deals with the assessing of property throughout the State. A large percentage of the farms in the State are over-assessed compared to other types of property. This recommendation suggests an amendment to the assessment law which would reduce this over-assessment.

Hopefully the measures suggested by the Land Commission will allow, through careful planning, a fair distribution of land for both agricultural and residential interests. The report of the Commission stresses that there

is enough land in the state for both interests, and that great care should be taken to assure that agriculture is not "pushed out" of the State by urban growth. Agriculture, as a \$3.5 billion per year industry, contributes greatly to the State's economy directly and indirectly through the hundreds of allied activities that have sprung up around agriculture. These allied activities furnish servicing and processing to the tune of \$2.5 billion per year, and employ three men to every one man that works on the farm.

Sheer economics, however, is not the only area where the benefits of agriculture are evident. Much of the scenic beauty of the State is the beauty imparted by fields of wheat and corn. Surely, a state that owes so much to agriculture should continue to take effective steps to preserve it.

Cooperation between the Department of Agriculture and the Department of Transportation will help prevent the destruction of good farmland.



Perfect Practice Makes Perfect

by ED HARTMAN '70

Before a game the eager anticipation that seems to hang in the air is unmatched by any other sport. What is it that can make people rush two hours early to be assured a seat just so they can be a part of what is going to happen? At Cornell, the answer is clear — hockey.

Hockey is always an exciting sport, but why should the Cornell team inspire such devoted support? The reason is that our team wins. They are champions. Coach Ned Harkness's Big Red skaters overpowered and out-classed every team in the nation last year and all but one this year, setting Ivy League, Eastern, and National records in the process. This all-but-unbelievable record is not going to end this year, and this is why.

The man responsible.



Cornell's hockey team is a potent combination of excellent players and excellent coaching. This mixture makes practice as well as games an exhibition of perfection.

Practice takes place in Lynah Rink. Anyone passing by the rink in the afternoon can easily hear it. Out on the ice are the four lines — red, black, green, and gray — both defenses, both goalies, and Coach Ned Harkness.

The red line has the puck. They skate down ice full speed on a "breakaway." They get one shot at Ken Dryden, one of the goalies. They pick up the puck and have another rink length breakaway, this time on George Swan, the other goalie. As the shot goes off, the black line is skating down on their breakaway. They are momentarily stopped near Dryden by Harkness. "Where was my wing? Don't you want to play wing?" Back down ice. Two lines later the tired red line is skating again. Fifteen seconds of strain, forty-five of rest for each line. For all sixty seconds, Lynah echoes with players yelling to each other and Coach Harkness's "Go! Go! Go! Dig! Dig! Come on! Skate!"

That drill is over. Now laps. Sprint, coast, sprint, coast. As the players flash past you can see sweat rolling off their faces, soaking the towels packed around their necks.

Next drill. The offense stands at center ice. The coach takes a shot on goal, the offense moves in to try to keep the defense from clearing the puck. There are jarring crashes against the boards and scrambles for the elusive disk. Finally a whistle, summoning the next line. "Go, go, dig, move!" Next line. "Go, go go!" The players scramble against the boards then skate away as the puck is kicked clear. They expose one player who does not skate away. He has smashed his head into the boards and is stunned. The doctor comes over and puts tape on the cut. After a moment the player is up and skating on his line. Soon this drill, too, is over, and speed laps begin again.

The next drill is a scrimmage. As usual, the action is

constant, not stopping because the puck is tied up on the boards. The game is played wide open, with a lot of breakaways. As a wing skates past Harkness, the coach poke checks the puck away from him. The wing tries to elbow the coach and is playfully rewarded by having his shoulder smashed into the plexi-glass. Each line stays out for a long time. Each is tired and sweating. Every player still plays his hardest, always to Harkness's staccato "Go! Go! Go!" Such spirit exists that even when they are exhausted they still joke about a goal being scored. This same spirit is responsible for the look of outright fear in the face of a defenseman whose man has skated past him as he hopelessly tries to catch up.

The scrimmage eventually ends and with it practice ends, except for wind sprints. At a blast from Harkness's whistle, the players sprint down ice, straining all of their by-now-rubbery muscles to their fullest. Everyone must be faster than everyone else. At the second blast of the whistle the players, who are now at full speed, stop and skate back at full speed. After this they gather around

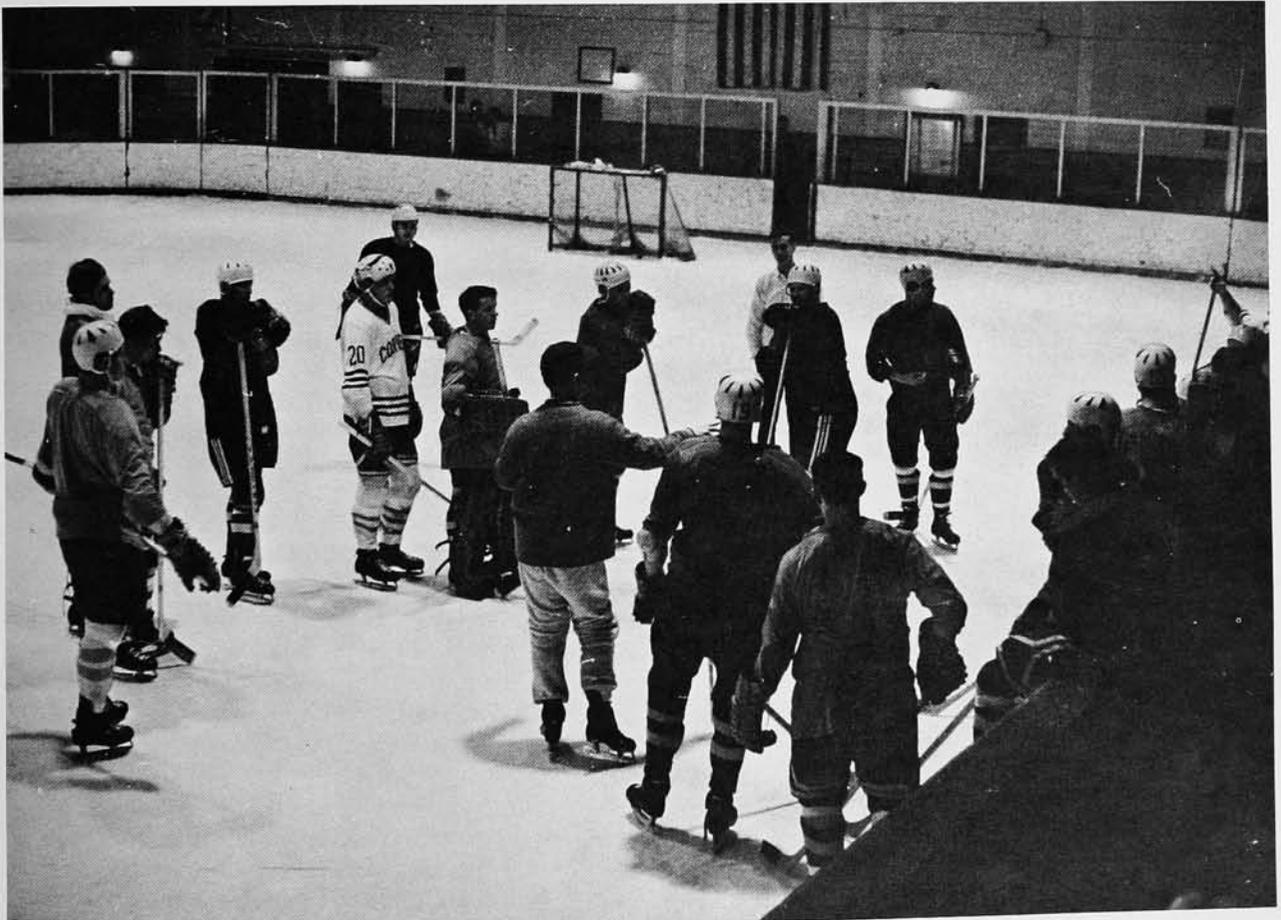
Harkness. There are a few jokes, some pep talk for the next game, and practice is over.

In the locker room there is a lot of noise, but in a corner the coach is talking to a few players. He is teaching. This is a Harkness trademark. He does this during a game, in the locker room, almost anywhere that the players are together. He is telling them of their faults and how to improve their game.

The locker room sessions between periods in a game are especially important. Here Harkness discusses the other team's weaknesses. This is part of the reason for our team's very good second period. But according to Harkness, the reason for the team's overall success is "hustle, desire, and some good breaks, but the boys make their own good breaks."

This year's champions will all return except All-American Captain Skip Stanowsky, and green line center Jim Wallace. The team rebuilt this year to finish number three in the nation. Next year Harkness and the Big Red hockey team will be number one again.

The team responsible.



World Food — A Crisis?

The world food situation is in a crisis — or is it? Don Paarlberg, former Food for Peace coordinator who served eight years under former President Eisenhower, looked behind myths and also presented the facts at the Agricultural Leader's Forum held at Cornell March 21.

With the world population expected to double in the next 30 years the food situation is one of the major challenges facing the world today. It was 170 years ago that Thomas Malthus wrote his famous *Essay on Population*, stating that people tend to increase more rapidly than the food supply, concluding that want and hunger are the natural lot of man.

Paarlberg, now a Purdue agricultural economist, stated that the industrialized countries have advanced at a rapid rate. The population has increased even faster, seemingly discrediting the Malthusian prediction.

"Meanwhile, in the less-developed areas of the world, conveniently out of sight from Europeans and Americans, the harsh Malthusian discipline was at work," he noted.

Now there is a renewal of Malthusian thought which Paarlberg calls the "Neo-Malthusian Age" that has supplanted a century and a half of complacency.

Why this new concern? One of the reasons Paarlberg gives is the greater awareness of problems once beyond our knowledge due to mass communications and wider travel.

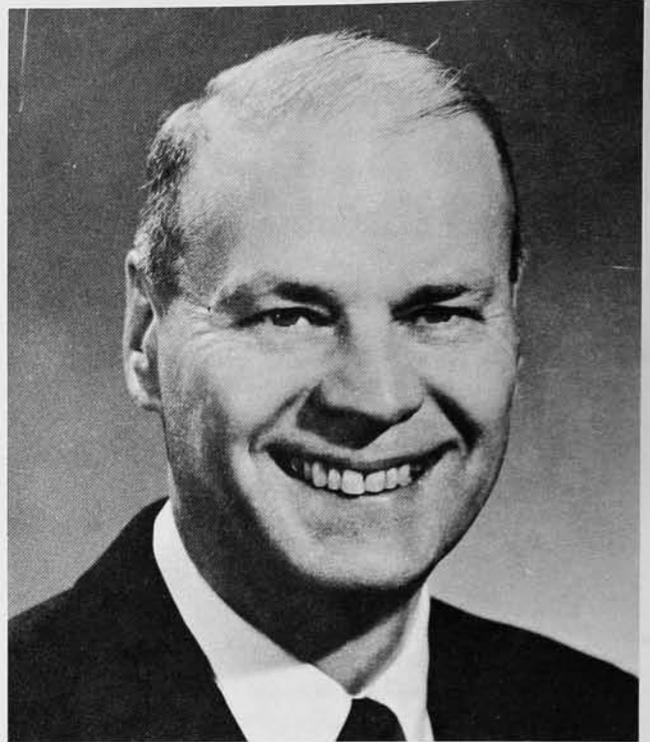
Americans are suddenly involved with the problem of hunger, but their background and understanding of these matters is limited. Most Americans are not familiar with hunger.

Consequently, myths have arisen, ". . . as they will when interest is high but understanding is limited. These myths have enough truth to make them credible but enough error to make them dangerous," said Paarlberg.

That we are in a world food crisis is the first of these myths. Paarlberg noted that a crisis is a new difficulty that has suddenly arisen but the world food situation is as old as history.

"The danger of a 'crisis mentality' is that if we accept this view we may not gear ourselves for the long pull. We may expect results too quickly. In the resulting disappointment we may relax our effort just as the problem increases in gravity," explained Paarlberg.

That the United States could feed the world is the second myth. He stated, "If we were to remove all acreage restrictions, our grain production might increase the



Don Paarlberg, Purdue agricultural economist and former assistant secretary of agriculture.

world total by 4 per cent." Paarlberg believes "American omnipotence" is a myth we must discard.

That the needy countries want all the free food they can get is the third myth. According to Paarlberg, a starving country will limit the amount of food taken so as not to depress farm prices or discourage farms from producing. To take more than it should would create a dependence on the United States and the country would lose its freedom of action.

With the myths dispelled, what are the facts?

Dr. Paarlberg cited a recent Department of Agriculture report on the per capita food output in the less developed countries of the free world which showed that food production is advancing slightly ahead of the increase in population. Agriculture has kept up!

Though agriculture is very primitive in many parts of the world, he noted that it is advancing everywhere.

In support of this view, Paarlberg quoted the President's Science Advisory Committee report, which concludes that the solution to the world food problem during the next 20 years is biologically, technologically, and economically possible.

Dr. Paarlberg views the future optimistically. "It could very well be that, precisely at the time when general famine is being predicted, the world is gaining the competence necessary to feed its people. Ours is the first generation to dare to think in terms of food enough for all."

ALUMNI

has an understanding of the role of the State Colleges at Cornell which is needed to reconcile traditional approaches with future needs. He is committed to an academic environment where excellence of instruction is a priority, majority and minority views are respected, and where there is continuing innovation to improve the quality of University life," say his sponsors.

The Alumni Association hopes that all alumni will take advantage of their opportunity to vote for their representatives to the Board of Trustees.



Mrs. Josephine English, Mrs. Frances Pringle, and Mrs. Emily Fletcher, whose years of service to the College add up to over a century, are retiring this year.

Mrs. English has been responsible, among other things, for the secretarial portion of the work with seniors and graduates of the College of Agriculture, in connection with Guidance and Placement.

Reunion Breakfast

All Alumni of the College of Agriculture are invited to attend their Annual Reunion Breakfast scheduled for 8 a.m. on Saturday, June 8, in the Big Red Room of Noyes Lodge. Steve Smith '35 of Yorkshire, New York, newly elected President of the Agricultural Alumni Association, is chairman of the event.

Mrs. Pringle has been in charge of the preregistration of all students in the College.

Mrs. Fletcher has been in charge of maintaining complete and accurate student and financial records, and consulting with students on graduation requirements.

The Agricultural Alumni Association recently honored these women for their many years of invaluable service in charge of activities of vital importance to the College and its students.



Ned W. Bandler '49, director of corporate development at Lever Brothers Company, has been endorsed by the Committee on Alumni Trustee Nominations to seek an alumni spot on the University Board of Trustees. Bandler is being sponsored in this effort by the Alumni Association of the New York State College of Agriculture.

His present responsibilities at Lever Brothers include long-range planning functions, corporate acquisitions and environmental change research. In civic affairs, as executive vice president of the African Medical & Research Foundation, he is active in the planning and administration of medical, nutrition, and health education programs for developing countries.

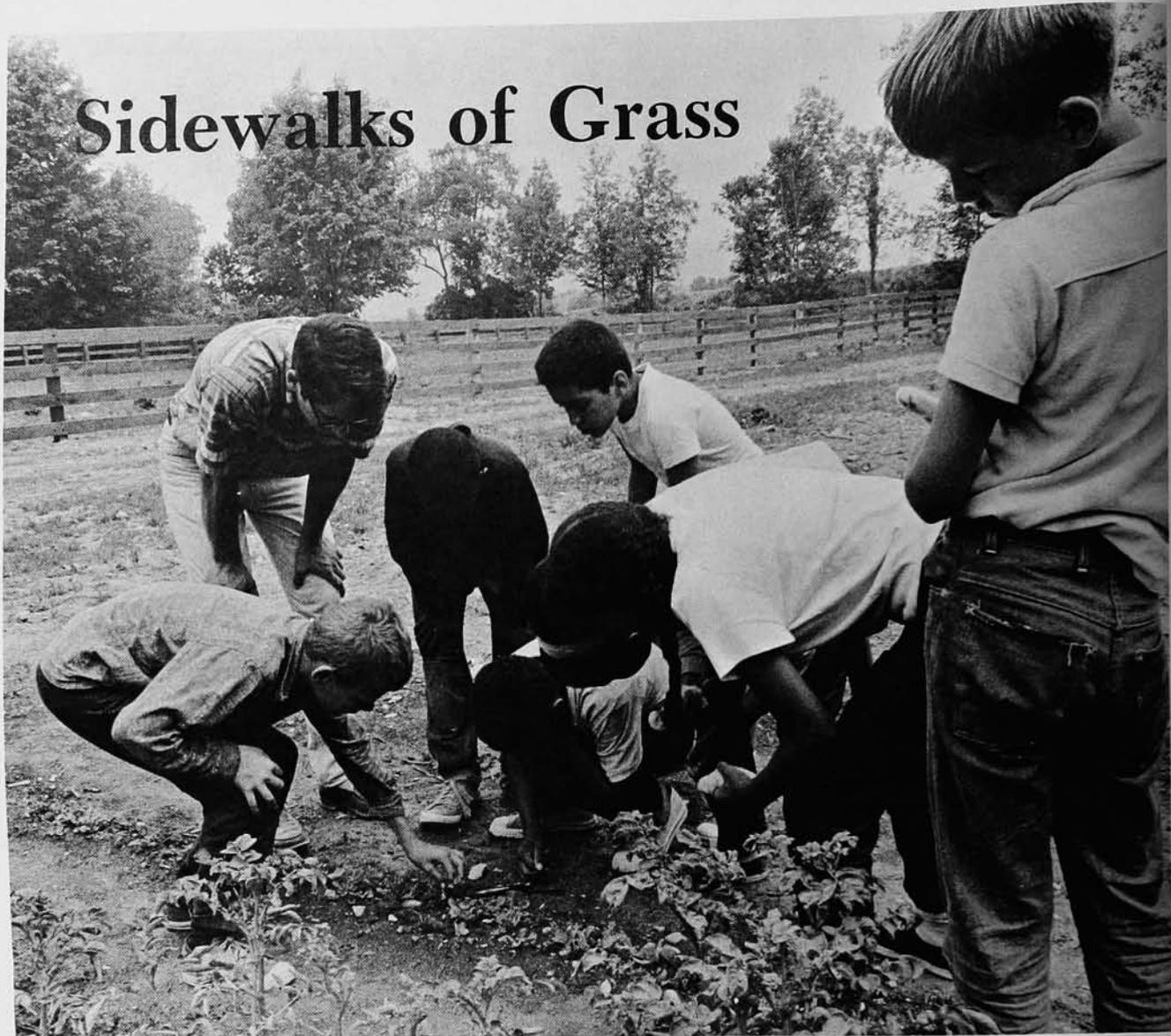
With his many alumni, professional and civic activities, "Ned Bandler's broad experience in planning and development, and his familiarity with University needs would be invaluable during a period of rapid change. He

PICTURE CREDITS

Cover — Sol Goldberg; pages 3 and 4 — Jim Oliphant; pages 5, 8, and 9 — The Cornell Daily Sun; pages 6, 7, 11, and 14 — Department of Communication Arts; pages 12 and 13 — Ed Hartman; page 15 — N.Y.S. College of Agriculture.



Sidewalks of Grass



Sidewalks of Grass, a 16mm motion picture in color, tells the story of city children exposed to farm life for the first time.

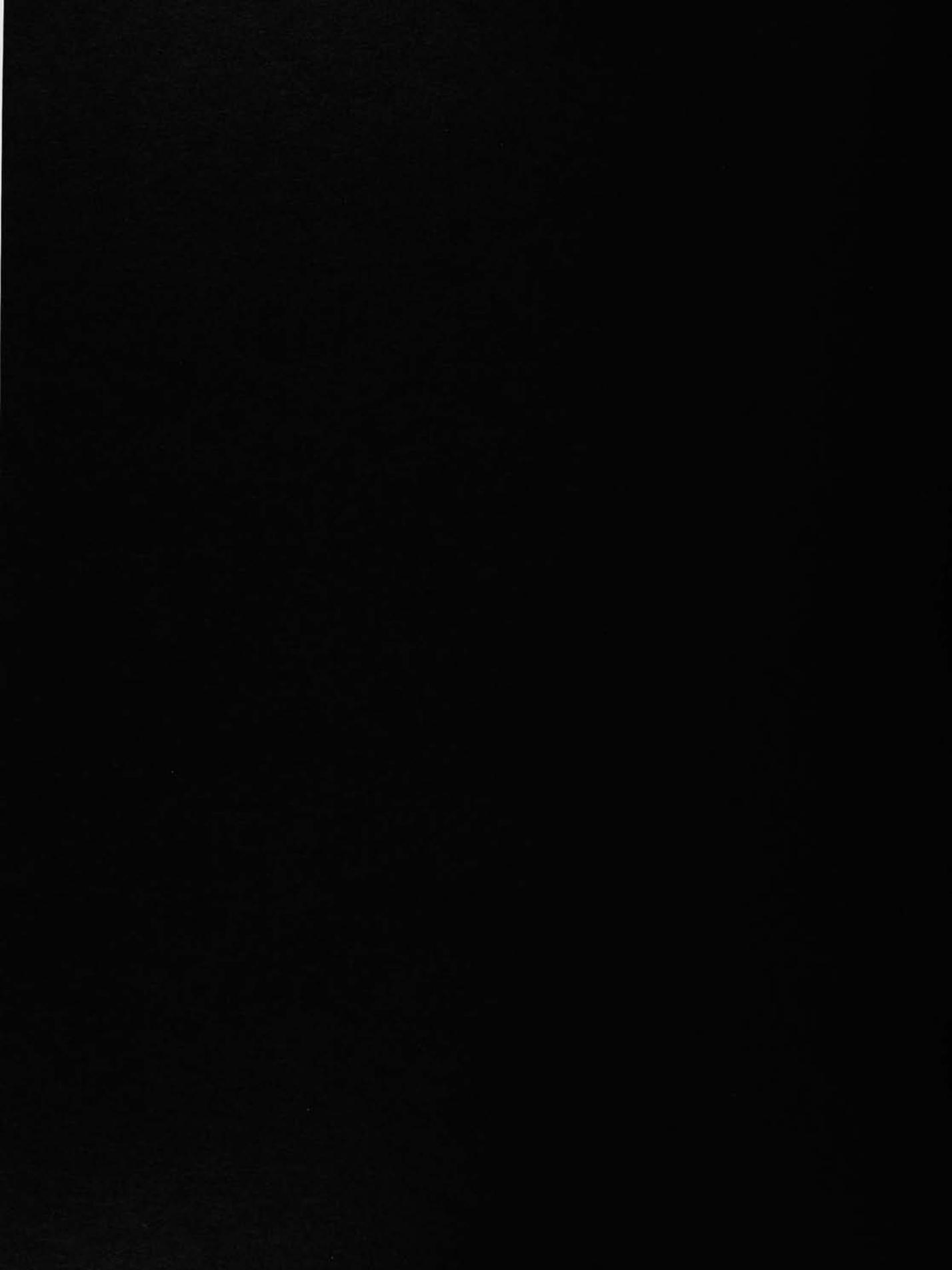
The New York Herald Tribune Fresh Air Fund summer camp near Fishkill, New York, offers city children a chance to play on the Sidewalks of Grass. The New York State College of Agriculture operates and staffs a model farm at the camp. It gives the children an opportunity to learn about agriculture and see the animals responsible for the food they eat and the milk they drink.

At the model farm, milk comes from cows, not bottles.

Wool is found on the back of sheep, not in the back of a store. Eggs come from hens, not cartons — and once in a while they become baby chicks.

Children plant their own seeds and see them grow into plants. They take field trips to neighboring farms to see the commercial side of agriculture, and they learn about the related occupations that make agriculture much more than farming.

The film, Sidewalks of Grass, is available for showing to school and community groups. For further information write Film Library, Roberts Hall, Cornell University, Ithaca, New York 14850.



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CORNELL COUNTRYMAN

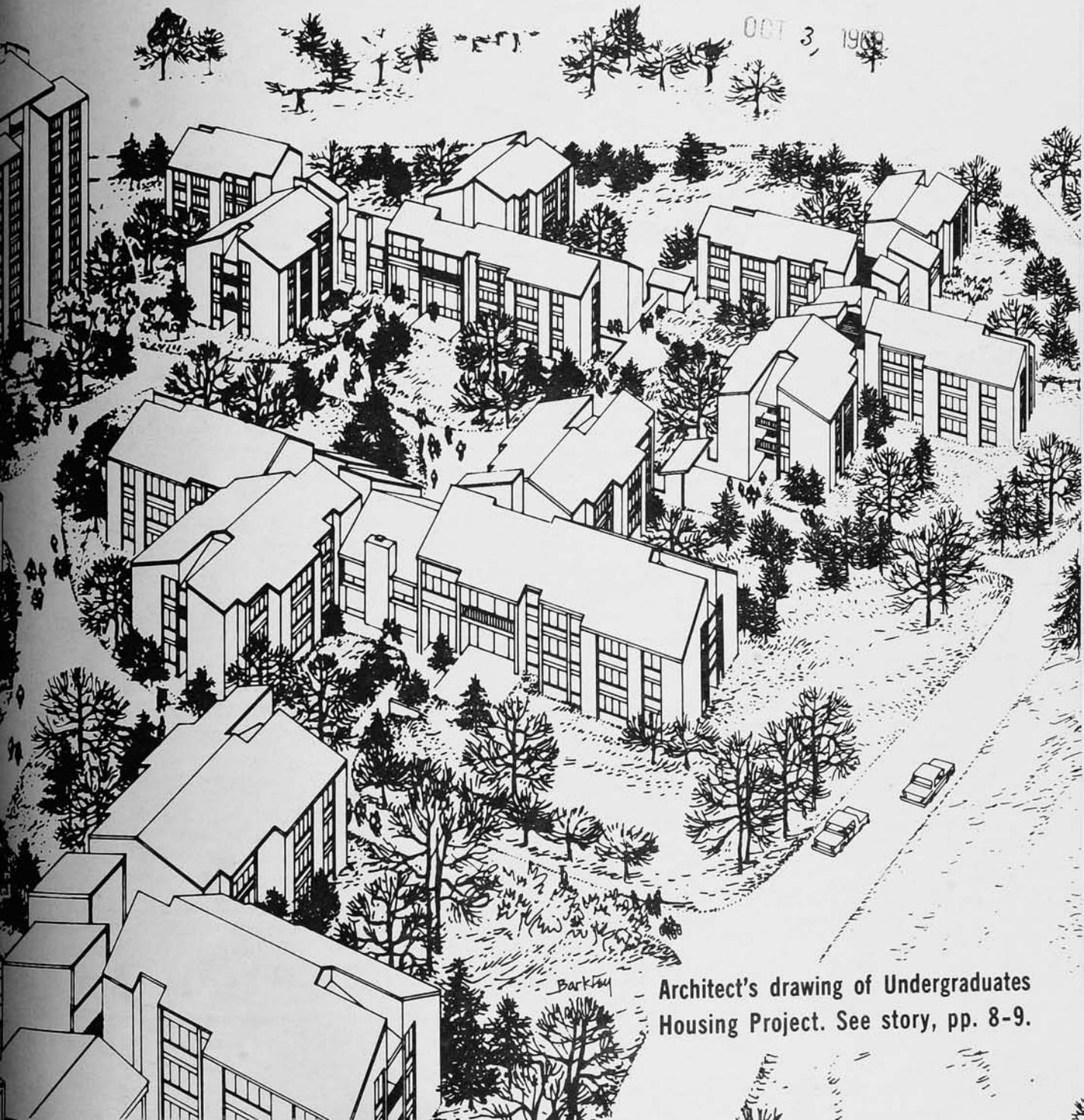
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NO. 1

LIBRARY

OCT 3, 1968



Architect's drawing of Undergraduates Housing Project. See story, pp. 8-9.

ON THE COVER

A new concept for undergraduate housing has been developed and is taking form on Jessup Road behind Mary Donlon Hall. Hellmuth, Obata and Kassabaum, Inc. of St. Louis, Missouri are the architects for the project.

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CORNELL COUNTRYMAN

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The Hungry Little Red

by TIMOTHY SCHIAVONI '69

On the dusty playing surface of Upper Alumni Field are some of the Big Red's hungriest athletes, Cornell's lightweight football team.

Lightweight football is unique to Eastern schools. Therefore only a handful of collegiate spectators are treated to the exciting and explosive play of lightweight football. Contrary to what one may think, the participants of this extremely quick and electrifying game are not midgets. They are athletes who do not have the physical size to compete with gridiron giants, but who love the game enough to face the torture of losing weight. Average off-season weight of players often reaches the 175 pound mark.

The sport is played by seven schools. Their league is the only lightweight football played in the nation. It is composed of four Ivy-League teams, an Eastern independent, and two service academies. The competing teams include Army, Columbia, Cornell, Navy, Pennsylvania, Princeton, and Rutgers.

The traditional powers of the league are the service academies. Both Army and Navy are able to draw from well conditioned and "trim" ranks. In past years they have consistently been able to play six-foot ends and managed to slim down broad shouldered linemen. Their summer training programs and emphasis on physical education make them well adapted to the lightweight brand of football.

In general, lightweight is a wide open type of football. Plays are executed with speed and precision, and the open-field runner frequently breaks loose. The players scamper about as their smaller, light bodies quickly dart in and about would-be tacklers.

The upcoming 1968 season could easily be THE year for Cornell's lightweight football team. Potentially it ranks as a front runner in a most competitive league. For several seasons it has made bids for league honors but always suffered a critical defeat to one of the service academies. This year the results should be different — a turning point for lightweight football at Cornell.

According to Coach Robert Cullen, "The team is ready to win. It will start off the season slowly with a test against civilian powers, Columbia, Princeton, and Penn. It will build up for the key contests with the militia."

This year's team wants to make sure that the Cornell bantams revenge past defeats. Co-captains Eric Davis and Lyle Tuthill feel that this is their year to win the league title. "We have a proven defense and all around experience. All we need are a few offensive breaks."

For the past week or two the lightweights have been working out under the watchful eye of Coach Cullen.

His charges take to the practice fields in assorted paraphernalia. Cotton and rubber sweat suits and several layers of towels or extra padding are commonly worn to sweat off excess poundage.

Dieting and weight loss often makes the team highly susceptible to bruises or injuries. As a result many players wear pads from head to toe. They resemble rag-covered mercenaries coming to and from battle.

At the moment, the key to this year's success is fifteen returning lettermen. Among them is quarterback Andy Nazarian. Andy, who called signals for last season's three win, three loss campaign, is the team's leading passer. He joined the lightweights after a year's layoff from the varsity, but, with patient, hard work, was in shape to become the team's number one signal caller. His strong arm and ability to call the crucial play make him the squad's greatest asset.

Receiving passes will be versatile Doug Wright and fleet-footed Ron Nehring. Ron, a member of Cornell's track team, has both height and sure hands. On last fall's performance he has to be rated as one of the league's best.

In the offensive backfield, Coach Tommy Charlton faces a rebuilding year. This year's sophomores are small but fast. Charlton will have sophomores Dave Civalier, Joe Santoro, and Ken Richardson to supplement veteran backs Fred Sutton and Jim Lewis. This group of talented backs could surprise opponents with a well balanced ground attack and an explosive scoring punch.

Up front, Coach Cullen has a seasoned line. His blockers are led by co-captain, Eric Davis. Eric, an all-league guard, is a two-year-veteran and is highly respected by the opposition. His fine blocking and outstanding leadership make him the foundation of Coach Cullen's blockers. Other veterans playing on the line are guard Joe Gambino and center Don Allen.

Defensively, Cornell's lightweights have been stingy and have permitted little scoring. This year will be no exception. Defensive coach Jim Showacre has a solid core to build on. His forces are anchored by co-captain Lyle Tuthill. Lyle is an all-league end who hits hard and literally stings offensive runners. His speed and ability to ward off blockers makes him a defensive stalwart.

Also heading Coach Showacre's troops is all-league tackle, Bob Hudak. Bob is recognized for his hard-nose tackles and ability to diagnose plays. Bob and Lyle will be joined by veterans Keith Additon and Jerry Smith.

Lightweight ball, scheduled as a minor sport at Cornell, receives little publicity and even less financial aid. The sport is played purely for love of the game. The athletes are devoted and willing to sacrifice that extra pound. Sweat, hard work, and long hours of practice can only be rewarded with success. This year, the reward could be the Lightweight Football Championship.

SHOOT...

THE SACRED COWS

by BROOKE BRESLOW '68

Everyone who is accepted by Cornell University is capable of receiving his diploma, but not everyone does. There are hundreds of intelligent young students who have busted Cornell and thousands who have nearly busted. Last June, at Cornell's one hundredth commencement ceremony, I received a B.S. degree, although there were several times during my four years at Cornell when I could have busted out. But I did graduate, and as a result of those skirmishes which I almost lost, I felt obligated to forewarn beginning students about the hazards of Cornell — and hopefully to make your four years valuable.

While it would be comforting to list the “do’s” and “don’t’s” that will help someone to graduate, such a list would also overlook the most important thing that anyone can learn at Cornell. Just as there are no two identical people, there are no two people who can — or should — study the same way. For my advice to be of any benefit it must be adapted to fit that individual. So I won’t suggest an efficient method of studying — I still haven’t found one — and I won’t condemn or praise fraternities or urge you to take S-U options in certain courses.

But I will say that there are five points to think about during a collegiate stay in Ithaca.

Point one. Everyone will tell you that Cornell, with 12,000 students, is large and that it’s easy to get lost,

both physically and emotionally. Every Cornell student is inundated with choices. The freshman is confronted by practically the widest range of activities available in collegia. The sophomore must try to narrow his sights toward some occupational interest. The junior settled in his major, must specialize because even major subject areas reveal the need for deeper study. And finally, the senior is expected to decide his life. And those four years of questioning and answering questions can easily engulf you. In fact, I would risk saying that every Cornell graduate has had moments of indecision while in the academic canyons.

Be flexible: I came to Cornell with my life’s ambition — I was going to be a doctor. But after two years of biological sciences, I was *not* going to be a doctor. And what greater indecision is there? What was I going to be? But I made a drastic switch and am presently enrolled in law school with the intention of becoming a communications lawyer. Inflexibility breaks you. And there will be many times when Cornell will expect decisions. But no decision should be crucial enough to break you.

Certainly Cornell is an institution of vast choices and heavy demands. But I know a two-year student who wanted to be a farmer, but who is now going to be a science teacher. He changed as a person, but Cornell



These, too, are self-made men. They leave Cornell richer for their experiences in and out of the classroom.

was large enough to accept that change. Knowing that, no choice or demand should be too great.

Point two. While not making each decision crucial, it isn't wise avoid making decisions. Faced with at least ten appealing extra-curricular activities, it is very hard to choose. Certainly it isn't an important choice, so perhaps it can be delayed. But putting off the decision means joining several activities. My freshman year, I was involved in track, musical comedy, writing, and fraternity life. I would have been in more activities only I didn't get into them.

First semester freshman year I didn't have to pressure myself to get adequate marks, but second semester I was in all those activities and I was rarely in class. The result was a *very* poor term average. I was told that my grades in the fall would dictate my status as a Cornell student or ex-student. I found it very easy to drop my time-consuming activities, but it wasn't quite so easy to manage my grades. My courses no longer relied on high school-based knowledge, but they depended on my freshman year courses, most of which I had just barely passed.

Thus, the first semester of my sophomore year was a disastrous rerun of the preceding spring. I was told that if I were to stay at Cornell, I would have to change my major. That's when I discovered the need for flexibility. I was very lucky. I was allowed to continue my education. But I then went to the other extreme. I participated in no activities, and I hated every moment. My grades now were fine because I was taking courses I could cope with and courses that I enjoyed.

But I had to do something else besides "school work." I had to choose which activities I wanted and I had to budget my time. To be graduated from Cornell University without having participated in some activity is, I think, to have missed a great part of the University. But don't spread yourself thin. If you try to make too much of "the best years of your life," you may never wear the mortar board signifying their end.

Point three. Just as it is essential to participate in a limited number of outside activities, it is also crucial that your course load include courses outside your major field. It has always frightened me when people who have a dead hour decide to fill it with a course in their major. Certainly it is essential to explore your major field to its depths, but there is such an amazing opportunity to learn about other fields. You shouldn't feel obligated, as a Cornell student, to decide what your interests will be when you're 50 years old. So take courses that relate to you as you are now. I regret not having taken the History of the Cinema. But there were other courses, more academic, that seemed more relevant to my major. They weren't really. And there are many courses that you may take because you "ought" to, but don't. You should be a student for you and not for what you will be.

Point four. One of the best ways to decide what you would like to be is by talking with people who have become something. And in a collegiate situation that means the professors. As a student, I have never really experienced the gap between the classroom and the teacher. But it is possible at Cornell to know more than just the man at the lectern; it is possible to know funny, serious, dull, interesting, brilliant, narrow, liberal, brittle, and warm men. You don't have to, in order to graduate, but it may make the ceremonies more worthwhile.

Point five. This point is actually a composite reaction to the first four points. And it I think is crucial. There should be no sacred cows at Cornell University. As a student, you must explore the University to locate its shoals and its purpose. Never discard respect for the academic institution, but awe and silence within its walls defeat its very meaning.

So question, explore and expand. Take advantage of the professor's availability and course diversity. The University is there and you make of it what you will. No, Cornell University has never produced a "busted out." They are self-made men.

THE PRACTICE REQUIREMENT:

Affecting Us All

by GREGORY POGSON '69

Tucked away in the basement of Roberts Hall is a small but very important office. For in this office there lies great power over every student in the College of Agriculture. This hard to find, small, and obscure room has complete control over at least one summer's employment and ultimately over whether every undergraduate enrolled in the College of Agriculture will graduate. For non-academic reasons it can "bust out" any student failing to meet its standards. This office is the Student Practice Office, administering and regulating the College of Agriculture's student practice requirement.

Have you ever stopped to wonder just what this practice requirement is all about? Why is it here? How long has it been with us? Whom does it affect? If you haven't, you are one of a minority, for at sometime in the undergraduate life of almost everyone here, this office may be responsible for an incalculable amount of apprehension, frustration, and despair.

The student practice requirement was officially instituted in the New York State College of Agriculture by the faculty in 1907. Professor S. R. Shapley, now directly responsible for the administration of the requirement, gives this reason for its establishment: "Many business and agricultural leaders," he says, "were complaining about the quality of the graduates from the College of Agriculture. They said that they had more than enough theory, but were lacking in practical knowledge related to their field. These new graduates could tell you why and what should be done, but not how to do it. As such

grievances were gradually passed on to the faculty of the College," Shapley continues, "it responded by instituting the farm practice requirement. It was, and still is, designed to complement the student's academic education with first-hand practical experience."

Since 1907, however, the practice requirement has been changed several times. It started out as a farming experience exam which every candidate for a degree had to pass, and then was amended several times as it became obvious that many students had absolutely no need for any type of farm experience. The last major change, in 1965, made it necessary for every student to show at least 13 practice credits earned in his field of specialization — farming or otherwise. (A unit of practice credit equals one week of work experience.) This is how the requirement is operated today.

Many students have the idea that the practice requirement is unique to Cornell's College of Agriculture. This is not correct. According to Shapley, the practice requirement isn't limited to the College of Agriculture, or even to Cornell. Other schools at Cornell, among them I&LR, B&PA, and Hotel Administration, have a similar arrangement. He also adds that many other universities besides Cornell have a practice requirement program. "We would like to think that we're unique," he says, "but we know this just isn't so."

What exactly is the role of this office at 16 Roberts Hall? According to Shapley, it is strictly "administration and regulation. That is to imply that we do no policy



Prof. S. R. Shapley, director of Student Practice, guides students in operating milking machines in preparation for the actual farm work that will complete their requirement.

formation here." With a staff of four, the office accomplishes a three-fold duty. It attends to the bookkeeping aspect of the program, who has done what and when; it evaluates the work experience of several types of practice credit; and finally it acts as a placement center — helping students to secure jobs applicable to their field.

The first duty of the staff is perhaps the most time-consuming. Every year all undergraduate students receive a carload of material from this office, informing them of their present status regarding the requirement, how much credit they need, and by what date they should have it. It is a monstrous task, performed quite efficiently.

One of the duties, that of evaluating work experience, is almost solely Shapley's. He is responsible for assigning the amount of credit for all farm experience. Any student who has to meet the requirement by working on a farm will come in direct contact with Shapley. He judges the work on the type of job, how it relates to the student's field, and the performance of the student on the job. Shapley and the student's advisor are responsible for evaluating the work experience of students who need non-farm practice credit. This is the case with most of the students in the College of Agriculture.

The last duty, that of a job clearing house, is perhaps the most important one to the student. The office keeps a file of all the employers who have given jobs to students seeking to complete the requirement. If a student is having trouble finding a job, Shapley is then able to give him several prospects. In fact, quite often employers contact the office, telling them what openings they have. It must be emphasized, however, that it is still the student's responsibility to secure the job. The office will only help in directing the student; it will not secure the position for him.



Margaret Horman, '69, works with children in a playground recreation program as a part of her specialization in Science Teaching.

This leads us into another area with respect to this office — that of its problems. Although they try their best, and progress is good, several shortcomings are still evident in the operation. For instance, all students seeking a job cannot be given an equal amount of aid. A student who needs farm experience may go there and be given a long list of people to contact, whereas a person in another area of specialization, say rural sociology, may be given only one or two names. Shapley admits that this is a problem, but he adds that they are doing everything possible to alter the situation.

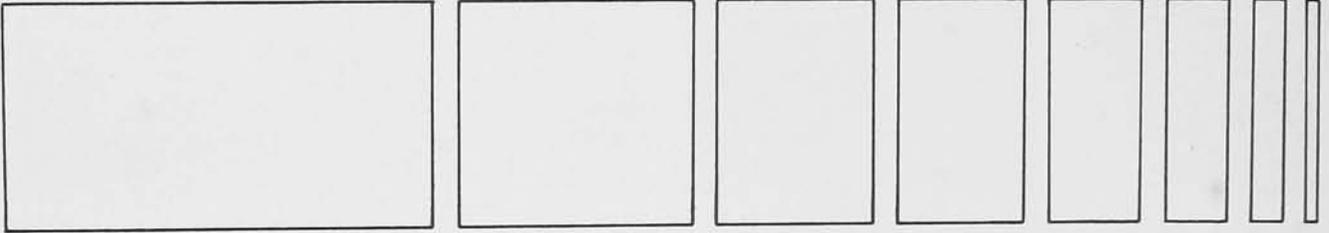
Another somewhat shaky area is that of the evaluation of work experience by the advisors. It is very hard to set standards stating how much credit specialized work is worth. All too often it depends upon the personal feelings of the advisor involved — influenced by whether or not he feels the practice requirement is a necessary part of college life. The student is then placed in an unfair predicament.

Perhaps another area of the whole practice requirement that could stand some restructuring is that of a student who changes his major. As it stands now, if a student has met the requirement for one field, then switches fields, as so many do, he must fulfill a new practice requirement. This can be a tremendous hardship on the student, especially since most of the jobs that satisfy the practice requirement are very low paying. As of yet, nothing has been done about it.

Even though seniors have been denied registration for unfulfilled practice requirements, the administration of the practice requirement is generally in the student's favor. The primary obligation of the office is to see that each undergraduate is able to maximize the value of the practice requirement. They do this to the best of their ability.

Cornell's Housing Revolution

by MARYA DALRYMPLE '70



Last spring many Cornell women were being rudely awakened by roaring bulldozers and snarling earth movers; the sounds of a revolution. Despite the noise, the occupants of Mary Donlon watched with fascination as day by day their back yard was transformed from a grassy playland into the beginnings of new Student Housing Project.

This \$12.5 million building program, designed to house 1,500 male and female students, will revolutionize and modernize the present housing facilities. It is the climax of six years of planning by faculty, students, and administration and will provide quality residences for all students at Cornell.

But why has the University massed the men, moneys, and material for such a project?

The Faculty Committee on Student Affairs feels that, being a part of the University as a whole, Cornell student housing should have fully recognized educational purposes. Therefore, what is needed are residences that will contribute to both student and community life by providing spacious, practical living facilities. The character of student housing has a obvious, direct impact on study habits and affects social behavior, an important part of the academic climate. The new housing project is a major step toward fulfilling these ideals.

With the present system of housing, this is not the case. There are 9,600 undergraduates (2,400 women and 7,200 men) and each year the problem of overcrowding has increased. Now, men have two major choices for housing after their freshman year; a fraternity or off-campus living (30 to 40 percent live off-campus.) The few upper class dormitories that do exist are hardly adequate or attractive to the upperclassmen. Located among the freshman dorms at the foot of libe slope, they are not suitable for parties, dates, or intensive studying. There is a definite need for additional good housing for men. Women are not quite as limited in choice of hous-

ing as men, since there are a number of structurally pleasing residential halls and sororities as well as off-campus living for seniors and some juniors. The women's dorms are class integrated so that freshman women live with upperclass women. But spaces are becoming limited and a greater diversity of residences is needed to eliminate overcrowding.

Hopefully, the problem of overcrowding will be eased by 1970 with the completion of eight buildings on the site behind Mary Donlon. The building plan is based on three phases. Phase I, to be completed by September of 1969, will consist of three 3-story dorms housing some 400 male and female students. Phase II, projected for September 1970, will add two 10-story high-rise buildings, two more low-rise buildings, and a large commons building. Phase III, planned for a time in the future when it might be needed, may add three more low-rise buildings or a complex of student apartments. The actual dormitories have been designed with the student's room as the primary consideration. Mrs. Ruth Darling, associate dean of students, considers the new room plan a "half way place between the traditional corridor system and the autonomous suite. It will provide privacy and the opportunity for association with peers by means of its physical construction."

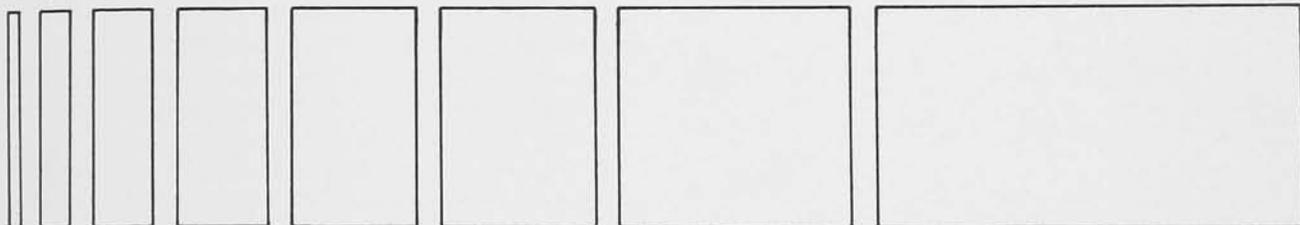
Construction of these new dorms is so technical it even confuses the contractors. The general organization divides the building into "bits," primary, and secondary units. A "bit" will be the smallest unit of living, perhaps analogous to the present corridor, but with less hall way. It will be made up of two double rooms and two single rooms to accommodate six students. The primary living unit will be made up of approximately six "bits." Thirty-six students will share a living block containing a common lounge, studio, and study room, and providing a general home-like environment. A secondary unit or "house" will consist of four or five primary units. The

overall idea is to provide the student with the privacy he now lacks in the open, noisy corridor system by keeping the units small and intimate.

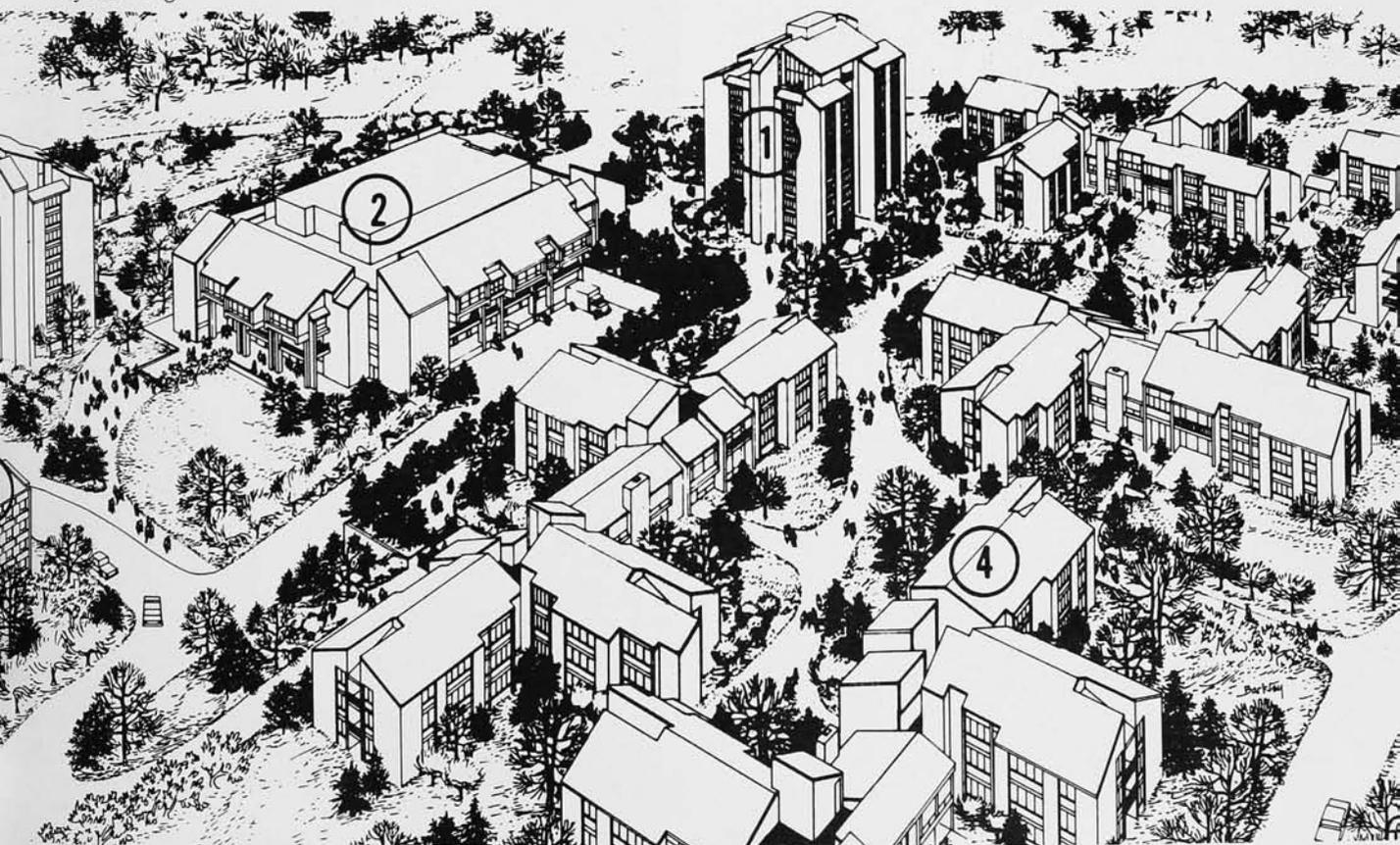
And in the center of these modern living units will be what is presently termed the commons, designed to fill the needs of all 1,500 students in the complex. Its recreation rooms, library, store, and laundry as well as study rooms and an expansive dining area will serve Donlon, the new buildings, and any person wishing to use them. "This dining area," states Mrs. Darling, "will encourage the formation of community feeling within the complex and provide an atmosphere for relaxed eating." There will be a cafeteria, waitered service, and private dining rooms, all in an attractive setting to discourage the present "gorge and go" eating habits of so many students.

In addition to easing the problem overcrowding, the new dorms will end a situation that has existed at Cornell as long as women have been here — the segregation of the men from the women (the men's dorms are nearly a mile from the women's residences). With the co-ed dorm system there will be a closer kinship between the various classes and a better chance for students of both sexes to enjoy each others' company. Under consideration also is the possibility of rejuvenating some of the men's dorms to be used as women's residences and further promote the idea of co-educational living.

Yes, a revolution is being waged, a revolution in the concept of what student housing should offer. And as so many senior men and women have said, "I only wish that they had started much earlier."



Key (1) One of the ten-story high-rise dormitory buildings that will house about 180 students. (2) The Commons will attempt to fill the recreational, social, and intellectual needs of students living in the complex. (3) Mary Donlon Hall. (4) One of the three-story low-rise buildings. Three such units are under construction and will be completed by September, 1969, according to the Office of Planning.



Cornell Builds Men Too

by GREY LARISON '69

"Companeigh, ah•tenn•shuhn!" roars out the powerful voice of a cadet company commander. In one swift movement, one hundred freshman and sophomore Army R.O.T.C. cadets snap to a rigid attention position, as Cornell's Barton Hall echoes the commander's order.

"Inspection, hahms!" continues the voice of Captain John Gross. Each man in B Company of Cornell's Army R.O.T.C. battalion smartly lifts his M-1 rifle diagonally across his body and opens its bolt in a movement that is perfectly synchronized with every other man in the company. Every weapon is checked to assure that it is safe, and free from any stray rounds of ammunition.

Then the company commander gives his men a series of commands as they practice the Army's manual-of-arms. After a few minutes, the men of B Company are all back to their original position of attention. The men are nervous, for today these members of the Reserve Officers Training Corps are to be inspected by their battalion commander. Each cadet in these ranks, in addition to regular class work, has worked hard to have his shoes, hat brim, and brass clean and shining.

Here comes the inspecting officer now. Watch how he carefully scrutinizes every cadet. The helpful criticisms which he gives to each cadet have, in the past, been largely responsible for the near perfection that you



"The serial number of my rifle is 3411584, Sir!"

now witness in each of the young men before you. Their every movement is executed sharply, correctly and with pride.

Perhaps the first impression which strikes you as you pass down the ranks is that, indeed, some Cornellians still believe in shaves and neat haircuts! In spite of all the publicity that Cornell receives from the press as the "Berkeley of the East," not all of this university's students are long-haired, placard-toting protesters. It has often been said that no newspaper need lie in order to support its point of view, all it need do is critically select those stories which it will print. So it is that the majority of America's college students are forgotten as a noisy few receive all the headline attention of many newspapers. Certainly, not all Cornellians support every foreign or domestic policy with actions which disrupt the functioning of their university.

"Soldier, what's the serial number of your rifle?" asks the inspecting officer, Colonel Landmesser. "The serial number of my rifle is 3411584, Sir!" snaps the cadet.

Do all of these cadets before you support the President's Vietnam policy, for example? Probably not. Then why, you ask, are they here in R.O.T.C. learning to become officers of the United States Army? There are probably as many answers to that question as there are cadets in the Corps. Some, it is true, are here because of parental pressure to join the program, others to obtain a 1-D draft deferment which will keep them safely out of the reach of their draft boards for as long as they actively participate in the R.O.T.C. program. But the majority are in the Corps to earn commissions as second lieutenants. They are men who upon graduation from Cornell want to serve their military obligation in a position which is consonant with their abilities. Between them and an Army commission lies four years of thorough R.O.T.C. preparation and training.

This four year program has been expanded in scope and greatly improved in quality since 1960. Before that time, every male student at Cornell faced a compulsory two years of R.O.T.C. training in either the Army, Navy, or Air Force program. Today, participation is entirely voluntary. Interested freshmen are invited to participate in the R.O.T.C. basic course which spans two academic years of study. For those who do well in this course and are interested in continuing in the program, a further two years of advanced training may be elected.

During their two years of the basic program, cadets are trained in the principles of drill (marching), small-unit tactics, organization of the infantry company and platoon, individual marksmanship, military history, and map reading. Brief overviews are also presented on such topics as U.S. strategic defense, the Russian Army, and counterinsurgency operations. During these first two years of training, the cadet is under no obligation to the Army whatever, nor does he receive college credit

for work done in R.O.T.C. (Therefore, the student is free to drop the program without fear of suffering any legal or academic repercussions.) Cadets in the basic course attend two lectures per week and have an afternoon drill period for one hour each week. That's what brings these cadets here today.

"Who is the Army Chief of Staff, soldier?" inquires the cadet officer. He can probably remember being asked that question himself not very long ago. "The Army Chief of Staff is General William Westmoreland, Sir!" answers the cadet sergeant standing at the head of the next rank. Right from the start of their participation in the program, cadets are expected to learn and know the chain-of-command from the President down to their own cadet squad leaders.

At the end of their second year in the Corps, cadets are given an Army physical examination to determine their physical fitness for continuing on in the program. They must also petition for a place in the following year's quota for the Advanced R.O.T.C. program. The cadet who passes his physical and who is accepted by First Army Headquarters (which has jurisdiction over all Army matters in the Northeast) is then given clearance for his participation in the program as a junior. At this time, each cadet must take the oath of allegiance to the United States Government and thereafter becomes committed to the Army for a total of six years of obligatory duty (two years in active service) to commence within one year of his graduation from college and his commissioning as a second lieutenant. In return, the Army begins paying a retainer fee of \$50 per month during the school year and supplies all books, uniforms and training materials needed by the cadet for the program.

During his third year, the cadet receives intensive training in military leadership, the art of commanding men, small unit tactics, and the methods of military instruction. A brief introduction to each branch of the Service is also presented in order to familiarize the cadet with the breadth of the Army's interests and capabilities. But by far the most valuable portion of the third year's training is that which takes place in the field. For it is in the field that each year 70 individual Cornell juniors are welded into a single unit, high in morale and working together as a team.

Last spring, the cadre officer-in-charge of the junior program was Major Byron Prahm. Nowhere could the Army have found a better man for the job of training 70 Cornell juniors than this infantry officer. Prahm learned the business of war the hard way, in Vietnam. He made sure that his cadets benefited from that experience.

Of his field training exercises, Major Prahm explains, "The name of the game is thinking on your feet." The cadet soon finds that the game can be a tough one for that man who must lead his troops in "combat." It is

there that he finds out all too realistically what it takes to lead a 40-man platoon in an assault of the enemy's position.

"Some of you guys can quote passages out of books that I probably can't even read," says Prahm, "but out there in the boondocks we're playing my game." Indeed, the cadet goes through a lot of rough training which he probably never visualized as lying ahead of him when he came to Cornell.

The immediate goal of this training is to prepare the R.O.T.C. juniors for a much more intensive, six-week training camp at Indiantown Gap Military Reservation in Pennsylvania. It is here that the cadet learns to live and breathe military life on a full-time basis and must convince regular army officers that he is worthy of a commission in the U.S. Army.

"Cadet, this weapon is filthy!" roars the inspecting officer. Do you find yourself feeling sorry for the cadet? "Mister, a dirty M-16 in Vietnam might cost you your life, remember that!"

"Yes, Sir!" replies the cadet, regrasping his rifle from the officer. Perhaps this cadet will one day be glad that he traded a demerit for that piece of advice.



The cadet's field training under simulated battle conditions make him a confident leader of small units.

After summer camp, these R.O.T.C. cadets return to their respective colleges and fill the cadet officer positions that were left vacant by last year's graduating seniors. The military cadre makes the final decision as to which new senior cadet will fill which leadership position in the Cornell Army battalion's chain-of-command. These decisions strongly reflect just how each man did during the preceding summer at Indiantown Gap. From then on, much of the R.O.T.C. program rests in the hands of these cadet officers.

Upon them is placed the responsibility for the success or failure of each semester's drill program. It is their

job to train each year's incoming freshman cadets and to build them into a military unit. The sophomores must be helped wherever they need extra work in order to raise their proficiency in drill, and they must be given an opportunity to develop their ability to command troops. Here is where the senior cadet must apply what he has learned in three years of the R.O.T.C. program — he must now lead.

During the fourth, and last, year of classroom work, cadets receive instruction on many different aspects of the military. Standard administrative procedures are learned by the future lieutenants who will soon have the responsibility of carrying out many of these procedures in their daily work. Closely related to administrative procedures is the topic of logistics. Each cadet learns how his unit will be equipped and re-supplied, and who he will have to see and where in order to procure goods and/or services of all types for his unit. One must never lose sight of the fact, however, that the ultimate mettle of an Army officer is demonstrated on a battlefield. And so the senior cadets continue their study of small unit operations for the offense, defense, and withdrawal.

On a somewhat higher academic plane, the senior cadet studies the intricacies of military law. What types of behavior might be considered as offenses against military as opposed to civilian law? Where do the two legal systems overlap? Consideration is also given to the ever-expanding role of the United States Army in world affairs. The presence of an armed force must necessarily have an effect upon the populace of the region in which the force is located; what might be some of those effects? Another question of current interest in this class might deal with the role of American army advisors in counterinsurgency operations and the building of national morale.

Has Colonel Landmesser finished his inspection of B Company? It looks as though he has. Perhaps as you looked into the faces of these cadets, you learned a little more about the training that goes into making an Army officer.

Now, Captain Gross has turned to his company and given them the command to "stand at ease." The tension of today's inspection finally breaks and he addresses the men of B Company, "Men, the battalion commander was pleased with your appearance and knowledge of the fundamentals of drill today. As your company commander, I am also pleased. Let's all keep up the good work!"

"Companeigh, ah•tenn•shuhn!" commands the cadet captain as he himself snaps to the position of attention. Raising his right arm to a hand salute, he orders, "Platoon Leaders, take charge of your platoons and dismiss them." And so another afternoon of R.O.T.C. drill comes to a close.

To Be Or Not To Be

by JOSEPH BULSYS '71

This September, approximately 1700 freshman men will enter Cornell. The fears and anticipation of college life totally absorb their minds. They envision the hard work of "booking," cramming for exams, and the intermittent social life. College and its total environment is quickly tossed before them with a typical sudden indoctrination and a sudden confusion. One of the important ideas which is brought before them is that of "fraternity life." The thought of where and with whom one is supposed to live for the next four years becomes a vital question. And accordingly, the great tussle of brain cells begins — independency or brotherhood.

Through this eventful fall, each yearling at Cornell will ask himself the following questions. Should I join a fraternity? Which one? How much will it cost? What are the disadvantages and advantages? These questions have to be answered before a signature can be written on a formal bid. The right decision will go a long way in determining the success of the next three and one-half years.

Besides the many personal questions, Cornell's first year men will be influenced by the rumors of the past few years. The fraternity system has been attacked by a great number of people as being old fashioned, unnecessary, socially narrow-minded, and detrimental to academics. These statements will go unheeded by many freshmen.

They will be told that fraternities are a necessity on the Cornell campus. They will be given an opportunity to discover and appreciate the value of brotherhood, integrated social and sports activity, and a communal living environment. Fraternities will demonstrate that they have contributed to social work, that they have invited top-notch performers and speakers to appear before Cornell audiences, and most of all that they have provided a unique and happy life for many Cornell men. Fraternities have always been a selective group. Their reasoning for being so is that people in a particular house must be comfortable and "get along?"

On the other hand the independents will argue that they have been of great value to Cornell. These are the people who academically and socially have decided to live on their own, to make or break themselves with little if any helping hands. They have helped give a vigorous spirit to the Cornell community.

In the past, both pathways have served worthy purposes and, in the future, both will be needed on this campus, for the sheer reason that people are interested in them and wish sincerely to participate in them.

The ultimate answer as to which path one takes will always lie in the hands of the confused, confounded, bewildered frosh. But if his decision is a sincere and a wise one he will solve the question whether TO BE OR NOT TO BE.



Cornell Cow Barn Burns

The Cornell University dairy herd has been moved to the Cotterill Farm in Dryden, New York, until the facilities destroyed by fire on June 22 can be replaced. (See November issue of Cornell Countryman for complete story on fire and proposed new facilities.)

Towards A Better Education

by RICHARD OLIVER '69

The student population is growing rapidly. Two million students were enrolled in U.S. colleges and universities in 1950, and the figure hit 6.5 million in 1967. The figure projected for the next decade is 10 million. We are in the age of the megaversity where enrollments may reach 60,000 to 70,000 students. Startling examples today are the University of Wisconsin with 54,997 students, and Ohio State University with 42,700 students.

Each of these students is different. Their differences in motivations, interests, past learning all contribute to the fact that students learn at different rates, and in varying amounts. These differences are important and must be understood, if we are to continue to have high academic standards.

Furthermore, the professors who teach this growing mass of students can no longer be considered 'knowledge sources.' The tremendous amounts of information becoming available on all disciplines is overwhelming. And the research goes on. Seven of the Big Ten schools alone graduated over 17,000 Ph.D.'s in 1966. The role of the professor is changing to that of a 'coordinator' or 'manager' of information. Today, he can only direct his students to the pertinent sources of information and help the student to apply this knowledge to his own needs.

In answer to these needs, two new ideas have recently been introduced into education, 'systems analysis,' and 'educational technology.' Illustrating the systems analysis approach to instructional education, Ronald F. G. Campbell, Assistant Professor of Communication Arts at Cornell University, says, "A team of experts made up of a learning psychologist, a tests and measurement psychologist and a media specialist assist a professor in the development of his course. This development, conducted in a systems analysis approach, would study the present course, make recommendations for change where appropriate, help initiate this change and evaluate the extent of this improvement in terms of more efficient learning."



Prof. Emeritus E. S. Phillips demonstrates the effective use of visual aids to the participants of the 1967 Institute on Educational Media.

These new systems approaches to improving education have been tried and are now being used with much success by Syracuse University, Michigan State University, and many others around the country. Charles F. Schuller, of Michigan State University, in his paper "Systems Approaches In Media And Their Application To Individualized Instruction At The University Level," expresses their importance. "If we are to truly individualize instruction and maximize its effectiveness, there must be a wide range of carefully designed learning experiences involving carefully selected methods, materials and media in appropriate combinations to meet clearly delineated needs. One purpose of the systems approach in instruction — or, more accurately, of the resulting instructional system — is to assist the instructor in determining what the above combinations should be."

A vital part of this systems approach, and a relatively new area itself, is educational technology. It encompasses

the use of the tele-lecture, use of T.V., films, video-tape, and programmed learning units, which, incidently, are already in use by, among others, the Department of Communication Arts at Cornell. The tele-lecture is a lecture given by a guest speaker, who may be anywhere in the country, via a telephone hook-up with the classroom, and aided by the use of slides and other visuals. T.V. presentations offer the advantage of presenting 'live' programs, while video-tape programs can be played over a T.V. circuit many times.



These are but a few of the many audio-visual devices that are available for use in today's classrooms.

Educational technology also includes the use of new audio-visual devices, computers, and so many more machines that it would be impossible to list them. In his book, *Man-Machine Systems In Education*, John W. Loughary, Associate Professor of Education at the University of Oregon, says that "a man-machine system is a set of planned procedures in which man and machine capabilities are used in an integrated manner to achieve results man could not achieve without the machine. In regard to education, these results can be thought of in terms of 'kind of instruction and learning' and 'amount of time required to learn and teach.'" These results can be considered great indeed, in a world where increased quality of education is demanded by a fast rising number of students.

Last summer, the Department of Communication Arts at Cornell held an Institute On Educational Media, in which 21 faculty members from various colleges and universities across the U.S. took part. Presented were new ideas in educational media and their application to classroom instruction. Ronald Campbell, director of the Institute, said that "the response we had from the staff and participants indicate the Institute was considered a success."

Out of this Institute grew a proposal by Campbell that there be established in the College of Agriculture,

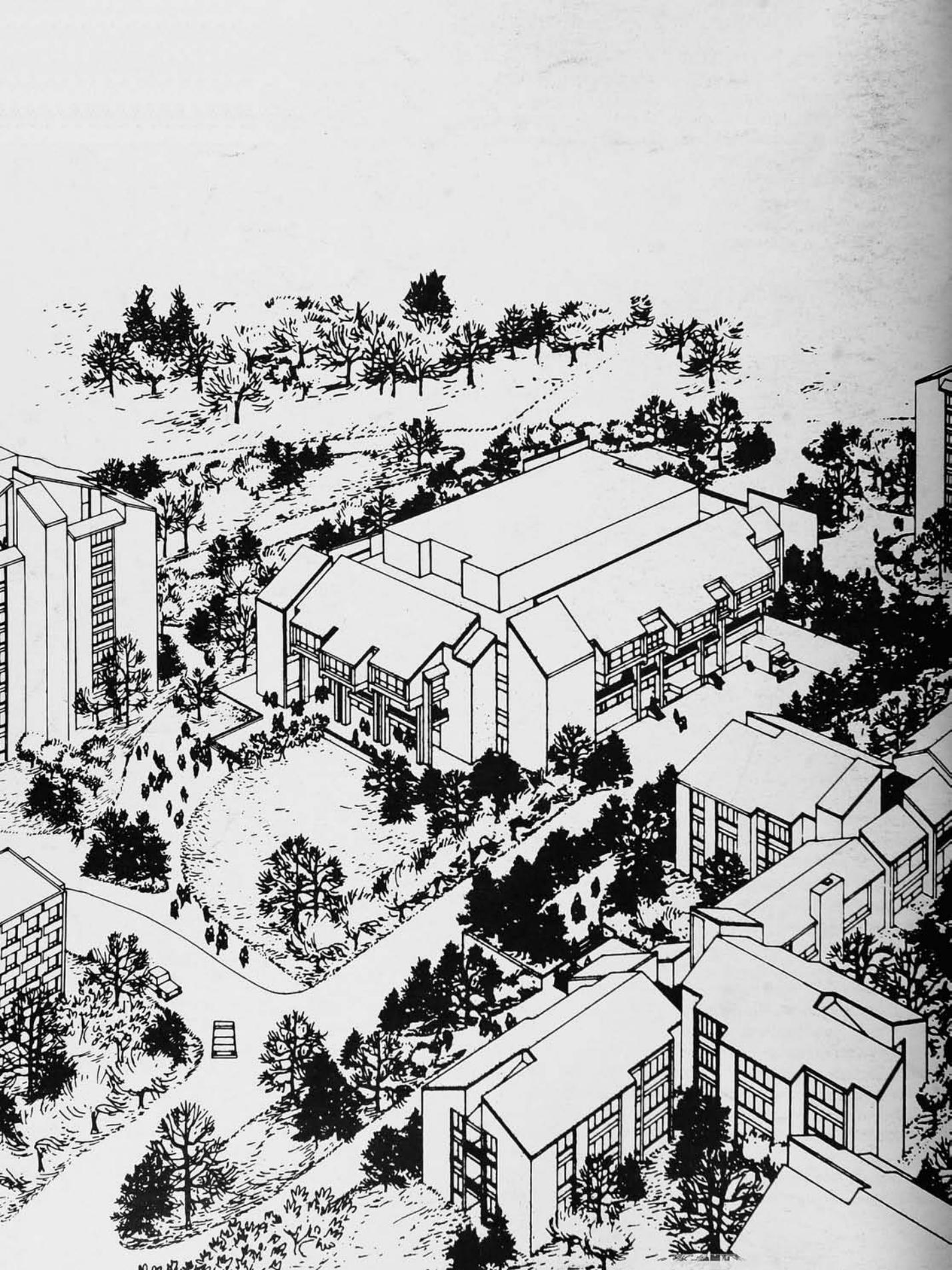
a College Instructional Development Program. "The purpose of this program," says Campbell, "will be to assist academic departments in the College of Agriculture to improve undergraduate instruction. It is a means whereby innovation in undergraduate teaching is introduced in a systematic, efficient relevant manner. The College Instructional Development Program is interested in quality education, executed in the most efficient means to meet the individual needs of the student."

If approved, the program will begin full-time operation in September 1969. The program will make use of the systems approach described previously, and the latest techniques in educational technology. As to the mechanical devices which will be used, Campbell says, "The exact machines which we will be using will of course depend on which one will be the most effective in a particular situation. We do expect to be using, however, such things as learning carrels, 8mm. films, and audio-visual techniques."

A limited version of this program will take the form of a Faculty Development Institute In Education Media this fall. This Faculty Development Institute will run for 30 Saturdays and will be of the same general purpose as the institute last summer. The participants in the Institute will include five professors from Cornell, five from Ithaca College, and ten professors from various Finger Lakes colleges. The program will be sponsored jointly by the Department of Communication Arts, the Instructional Resources Center of Ithaca College, and the U.S. Office of Education.

When the College Instructional Development Program begins operation in the fall of 1969, the students in the College of Agriculture can expect to see changes in presentation of courses, and new techniques in education unfolding. Herbert L. Everett, Director of Resident Instruction for the College of Agriculture feels that this "is the beginning of dramatic changes in the presentation of courses that the student will see in the not-to-distant future. As an example," Everett says, "programmed learning units and learning carrels will soon play a large role in some of the key courses in the College. This will be of great value to the student by putting the emphasis on individual instruction, especially in the larger courses where greater personalization is now virtually impossible."

This program will be a meaningful experience for professors and students alike, not only here in the College of Agriculture, but throughout their lives. Everett points out that "these new concepts in learning are being used with increasing frequency in higher education, business and industry. The encounter with these devices now, will be just the beginning of what is fast becoming one of the most important, new learning techniques." In more general terms, it is another step towards a better education.

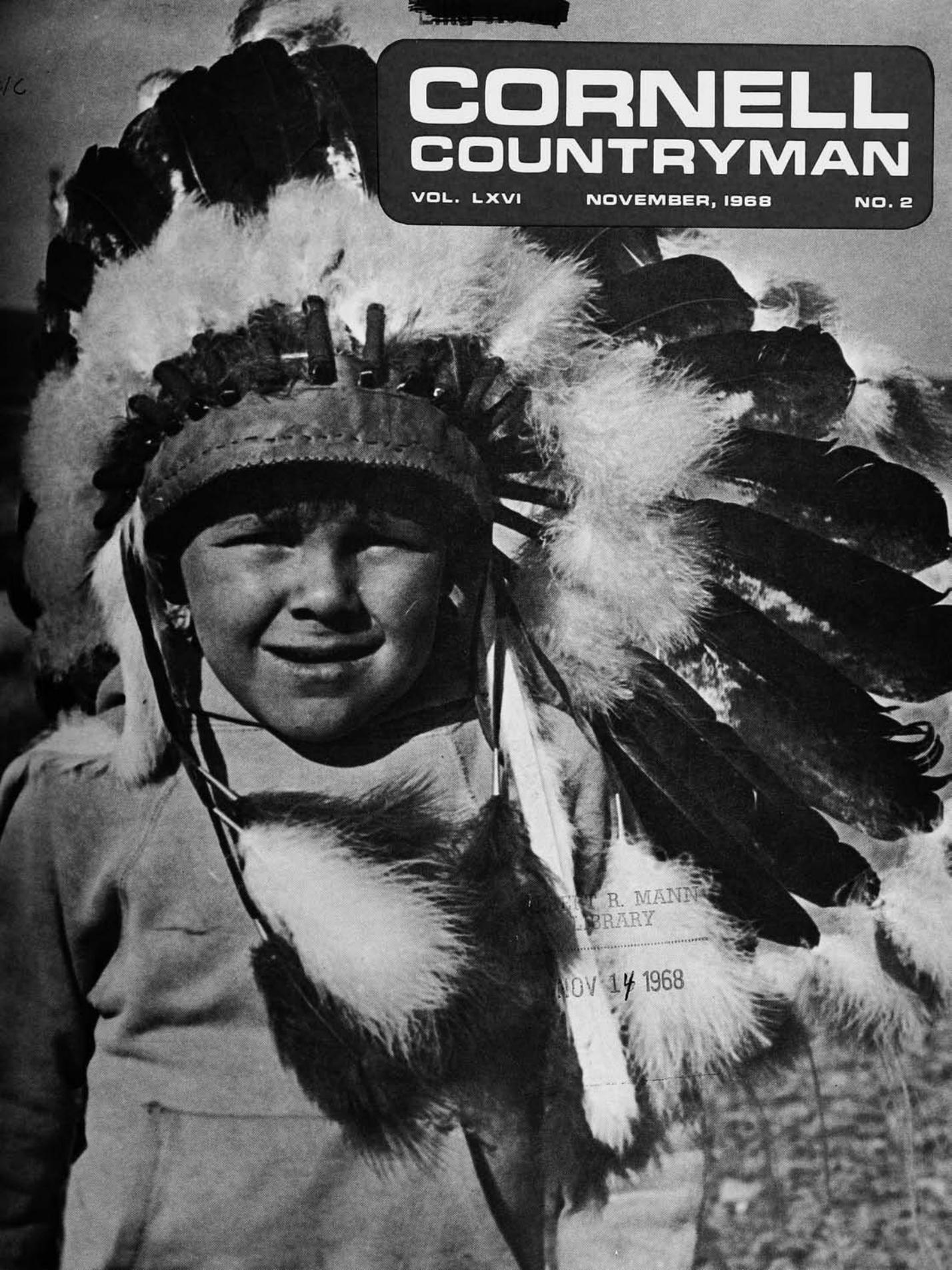


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ON THE COVER

This little boy is a full-blooded American Indian of the Passamaquoddy Tribe, in Maine. See page 12 for story.

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THE BARN FIRE – AND AFTER

by Marya Dalrymple '70

It was Saturday, June 22nd. The day had dawned a sparkling, sunshiny blue and as usual operations for the early milking proceeded in the Cornell dairy barns. The loud hum of the hay driers whirring to dry the hay brought into the barn the day before, drowned the sounds of human voices. No one heard the stifled giggles of the two little girls; no one saw them walk up the hay-loading ramp and into the loft carrying a stack of paper towels.

A tiny hand tugged at the sleeve of the young barn attendant who was sweeping up. "Mister, there's a fire in the loft." It was 2:45 in the afternoon. Black smoke escaped from the loft to smudge the once perfect first day of summer. Within moments a number of policemen swarmed about the area commanding order, awaiting the firemen, and watching the flames grow higher.

They watched, stunned yet awed, as two of the barn attendants and a fearless girl, who had come early to help with milking, streaked into the barns in an attempt to save the animals. First the cows in the east wing of the barn were herded to safety. A brown swiss broke from the bunch and ran, confused, toward the flames which had engulfed the end of the wing. Impulsively the girl shoved and yanked her toward the pasture.

The firemen came, but now, driven by the drafts from the driers, the fire was beyond control. More people worked to pull sheep and calves from their pens. Rabbits, freed from their cages and chased by helpful bystanders, hopped everywhere.

A silo blew its top, then the steam pipes exploded with the sound of a dynamite blast. The roof of the west wing fell in and flames spread to the top of the nearby horse barn. Cows, ponies, sheep, and calves mingled, safe in a back pasture while the firemen did their best to save a test barn.

In fifteen short minutes the flames had spread throughout the entire main barn. Townspeople stood in groups, voicing disbelief. The brave girl who had saved so many of the animals stood alone, tired, sweat and soot streaked across her face, and large holes in her clothes where hot cinders had singed. The barns were a total loss but only a calf, nine sheep, and a number of rabbits had perished. Slowly, she and the others who had worked so hard to free the stock, walked toward the back pasture to help sheep-dog the cows into trucks which waited to remove them to temporary quarters at the Warren farm.

Today, if you drive out Judd Falls Road, it is hard to see where the Cornell barns once stood. All the stock is now being taken care of on the large Cotterill Farm. "It is unfortunate," states Barth E. Mapes, Administrative Assistant, "that the barns burned before our plans for the new farm building project were finalized. On June 1, 1968, a proposed plan for a vast Animal Science Teaching and Research Farm Center, in the planning for five years, was presented to the state for approval."



In fifteen short minutes the flames had spread throughout the entire main barn.

Under this tentative project, which if approved will be available in about five years, the state will buy the Cotterill Farm as well as the properties of six other owners and erect new barns for the livestock of the College of Agriculture. The new facilities would enable the College to maintain a "high quality, up-to-date teaching program and to be effective in conducting research vital to the needs of livestock producers in New York State." Mr. Mapes has stated that the project will be particularly beneficial to the departments of Animal Science, Agricultural Engineering, Agricultural Economics, and Agronomy.

The possibilities of a wholly experimental milking parlor, facilities for vast waste disposal study, and a modern dog farm are a part of the proposal.

Cornell has always been a leader in animal studies and research. The old barns are gone, yet, an enlightening, modern future lies ahead.

The Cornell Coed —

Ugly Duckling Or Campus Darling?

by Karen Bittermann '69

Each September the campus swells with a new class of freshmen ready to begin a four year adventure at Cornell. Rapidly they are escorted to a multitude of activities designed to orient the befuddled freshman to college life. Each September at sundown, on the last day of Freshman Orientation, knowledgeable upperclass counselors can be seen leading their weary freshmen charges from all parts of the campus to the steps of Goldwin Smith Hall for the final event before the onset of fall term classes. The Glee Club is assembled and ready to sing their welcoming song for the occasion. This year, as every year, the ever-popular "Song of the Classes" — a ballad describing every year in a Cornellian's life — will be sung. The upperclassmen glance at each other with that knowing look and nod their heads in silent agreement when the familiar lyrics waft out over the darkening Arts Quad.

"I date only girls from Elmira and Wells

For in my opinion, they all beat Cornell's."

"If we were all ugly, I could understand," complained one 1968 coed whose dreamy visions of the 3:1 male-female ratio had been permanently shattered.

Every gala weekend, when house parties flourish, wide-eyed girls with suitcase in hand can be seen strolling to their lodgings on the arm of a beaming and well-scrubbed Cornell man. Watching from her curtained dormitory window, the modern day coed surveys the situation and then her gaze returns to the stack of books that will keep her occupied for the night. But her mind is elsewhere. Why are the weekend dates from Ithaca, Cortland, Elmira and Wells Colleges but rarely Cornell?



Class picture of 1887 — Notice the expressions of the male students.

This problem existed as early as 1874 when a newly-arrived campus coed, Miss Anna Botsford, heard these words from a male Cornellian: "You won't have a gay time for the boys won't pay any attention to the girls on campus."

After several months on Ithaca's academic grounds, Anna deduced that "Cornell must be a good place for a girl to get an education; it has all the advantages of a university and convent combined."

The early coeds were a few years older than the men and created a highly unsatisfying 10:1 ratio for the Cornell man. Hearty pioneering souls were the girls who endured criticism in order to get the best education. The feminine scholars weathered hardships and sacrifices to be a Cornellian. Proper society still debated hotly the desirability of college-educated women. As proof of her mental ability and desire, the coed overemphasized her high marks when talking to her masculine classmates. Earnestly she read her books and with almost grim determination, prepared for her life's work in professional fields. And thus was born the oft-told legend of the female grind.

Today's coed can point her finger at social trends of the late 1800's as the root of anti-coedism. At that time, a women's isolation from academic affairs was the accepted way of life. For this reason, the feminine presence on campus was received with uncertain emotion from the Cornell male. The masculine ego smarted from the remarks doled out to him from his Ivy rivals at Dartmouth and Yale concerning his feminine classmates. Snickering accompanied his nonchalant mention of Cor-

nell allegiance and the male protested vehemently when he was accused of attending a ladies' seminary.

The embarrassment wasn't softened by the superiority of the women in recitation sessions and during examinations. To pick up his shattered self-esteem, the male of yesteryear shunned the female, hoping this way to assert his superiority at least in the social realm.

In keeping with the times, a sensational article appeared in the *New York Herald* on June 24, 1894, which stated that, "Male students do not regard coeds as their social equals . . . There is almost no acquaintance existing between the coeds and the students who, in the main, represent the higher social plane . . . The fraternity men, Psi Upsilon, Alpha Delta Phi, Kappa Alpha, Sigma Phi, D.K.E., Chi Psi, and others of the leading fraternities have practically nothing to do with the contingent whose abode is Sage College." Yes, the social life of the coed was hard.

At the turn of the century, the female was still far removed from being the campus darling. Perhaps in stoic resignation, the women tended to keep to themselves. The men lurked in the smoking rooms and the women found a haven in the ladies' lounges. Their extra-curricular diversions centered around all-girl affairs, the chief organization being the Sports and Past Times Association.

Other all-girl activities included a crew team of eight that was coached on Cayuga inlet, a polo team, and a track team that held meets complete with high jump and broad jump. Saturday hikes for gym credit through the Buttermilk Gorge gave rise to the famous legend of the voluptuous coed calf — a physical feature that enables one to distinguish a Cornellian from other coeds solely on the basis of the girth of the girl's leg. The Women's Athletic Association conducted walking contests to various parts of Ithaca, the first prize going to a determined coed who paced off 50 miles at the speed of 4½ miles per hour. All these activities filled the girl's hours, hours that might have otherwise been spent with the opposite sex, had the males been more willing.

Many of the young women were scornful of competition for male attentiveness. The Junior Prom, held in the Old Armory, was an annual spring affair of decorum — white gloves, petticoats, violets and the stately Grand March. Its arrival was awaited eagerly each year by the coeds, but most of the men invited girls from home. The wallflowers, unasked to the Prom, retaliated in spirit by holding one year, an affair of their own, an Anti-Junior Prom.

Shortly after World War I, males returned to the campus after years of only male companionship. As a result, the sparse appreciation of the Cornell beauty reached a new height. Former past times such as prize fighting and sucker fishing were gradually replaced by dancing and even an occasional hint of romance.

But the cold war of the sexes still persisted. In 1920, women students were invited to march in a student

parade before a Dartmouth-Cornell football game. Conspicuously placed at the front of the line behind the band, their presence was less than well received. A scheming prankster announced that the fair sex was marching because they demanded rights to try out for athletic managerships. The Cornell men turned various shades of scarlet in front of their Dartmouth rivals. Sarcastic comments about the ladies' "seminary" at Cornell filled the stadium air.

The "better fraternities" seethed at their skirted classmates for causing them such acute embarrassment. As is the Cornell custom when assembling protest groups, an ad hoc committee was hastily assembled — this one to condemn women. It demanded sex segregation and a decrease in the coed population. Removal of the fair sex from the campus was their fondest dream.

Yet all wasn't bleak for the Cornell coed. In the early days as well as today, there existed attractive, intelligent women who didn't suffer from a lack of male attention. They may have been a rarity, but history confirms their existence.



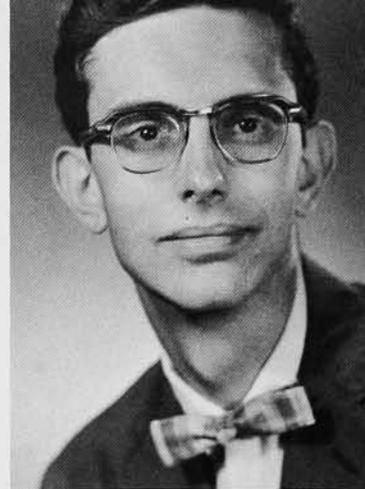
The women's crew team of 1915 — a poor substitute for dating.

One woman who found college a source of delight was Dr. Emily Barringer, an early student who was later to become the proud wife of a Cornellian and the first woman ambulance surgeon. She reminisced, "I still thrill to the memory of a young tenor voice soaring over all the others as the men of the Glee Club serenaded the girls of Sage College in the winter moonlight."

Throughout the years, the Cornell coed has gained more acceptance by her masculine peers. This year marks the 100th anniversary of the first coed to study at Cornell. Who knows, perhaps in the next 100 years, the last vestiges of ugly duckling sentiment will disappear from the campus, never to be heard about again, and the true campus darling image will rest upon the Cornell woman.

KEEPING UP WITH KEETON

by Ruth Nickse '68



Dr. William T. Keeton

"If he's not around the office and it's a beautiful day, we know where to find him — he's out with his pigeons," said Mrs. Bertha Blaker, a secretary in the Division of Biological Sciences.

She was speaking of her boss, William Keeton, associate professor of biology. He is a familiar figure to at least 900 students a year who flock to a large lecture hall in Ives to have the mysteries of life revealed to them by this extraordinary man. To the students, Keeton is a neatly dressed, black-haired professor, whose blue eyes are framed by dark-rimmed glasses. They are also familiar with his characteristic hands-in-hip pocket stance, but his conservative appearance belies his broad range of interests.

"Keeton really enjoyed his undergraduate days at the University of Chicago," remarked Howie Howland, a graduate student who remembers Keeton in those days. "He had a lot of interests even back then, and spent one summer vacation hitchhiking to Alaska. But what I really remember was that he was interested in birds and girls."

At 35, Keeton has quite a few of both. In the coops on Turkey Hill, a few miles from his house, are some 450 pigeons whose orientation and homing behavior he is studying in depth. And at home, a red ranch house outside of Ithaca, there are presently three girls: his attractive wife Bobbie, and his two elfin daughters, Lynn, aged 7, and Nancy, aged 5. The newest addition to the family is 18 month old William Scott.

Although pigeons and his family take up much of his time, one of Keeton's primary loves is teaching. "As far back as I can remember," recalls Bobbie, "Bill wanted to teach. That's the only thing that could possibly get him up for an eight o'clock class!"

But a student settling into a seat in Ives isn't aware that the slight man standing at the lectern wearing his trademark, a bow tie, is anything but wide-awake. Doffing his coat, and speaking without a mike, which he considers an anathema, in an eloquent and articulate manner, Professor Keeton commands the lecture hall. In highly organized, fluent lectures, he unravels the intricacies of zoology and botany to his class, interpreting, relating, and integrating material.

"It all seems so simple when he explains it," said one student. "He has a knack of tying things together so that you get the whole picture."

Behind this smooth presentation is a thorough knowledge and enjoyment of the subject matter. His open-minded approach about everything demands that he caution his class repeatedly that much of the information

he imparts is rapidly undergoing change. It is part of his philosophy of education to make the students aware that today's accepted hypothesis may be questioned tomorrow.

He has perhaps become most widely known as the author of the new general biology text called simply, *Biological Science*. It is acclaimed by others in the field as the best introductory text in general biology available. The book has sold over 50,000 copies since it was published in February, 1967. An acquaintance at the University of Florida stated in a letter: "It's the first scientific biology text written that pointed out the challenge and the *excitement* of biological investigation and discovery. We are all in your debt."

All this acclaim is very satisfying to the Keetons, as the book represents four long years of hard work: "A long haul," says wife Bobbie. A biologist herself, she actively helped in looking things up for Bill. "The diddy work," she says, "but I really was the ears." After every chapter was painfully written down in longhand, Keeton would read it aloud for her comments. "We used hundreds of books for references," she says, "and they were piled on chairs, tables, and all over the floor before we were finished."

But, there are still other interests that vie for Keeton's attention. "His family is his hobby," said one associate. "He's really a doting father."

Picnicking is a family activity they all enjoy. Another interest that Keeton has just begun to develop is the study of wines. His favorites at this time are the German Moselles, and a future project will be building and stocking a wine cellar.

The Keetons both enjoy music. Bill himself played the violin well enough to play in the University orchestra at Chicago, but lately hasn't had time to pursue that, or gardening, another hobby he has enjoyed.

Bill Keeton seems to thrive on all this activity and amazes his associates by keeping his composure under the variety of pressures he encounters. But something has to be forgotten in this heavy schedule. "It's his hats," confided Bobbie. "He's lost three already this fall."

Magic In Their Backyard

by Mike Hogan '69

"As far as anybody knows, it's a phenomenon of nature." Mr. Clarence Stephens of Slaterville Springs was talking about the "magical waters" in his backyard, waters bubbling up from an underground spring with fascinating powers. The clear liquid has some property (scientists don't know what it is) which coats glass with an amber iridescence.

The qualities of the springs at Slaterville are not a recent discovery. A New York State Historical Marker by the side of Route 79 tells any traveler who bothers to stop that the "magnetic mineral springs" in the area were discovered more than a century ago. The first artesian well in the valley was drilled in 1871.

During the late nineteenth century, Slaterville became one of the health spas frequented by the wealthy from all over the country. While not a resort comparable to Saratoga Springs, Slaterville did boast three resort hotels. Legend has it that the glass-coloring property of the springs was discovered in one of these resorts. Apparently (so the story goes), a child dropped a glass slipper into a spring. Retrieved the next day, the slipper had an opalescent look worthy of Cinderella.

The owners of the hotel were quick to capitalize on their guests' serendipity. They began to color small pieces of glass as souvenirs by soaking them in their unusual spring.

Mrs. Stephens said the products from the hotel well differ from the modern examples.

"The old well (it was some 500 feet west of the Stephens' home) colored glass much faster, but the end result wasn't as pleasing. Sometimes the early pieces colored unevenly, leaving streaks in the glass. The finish was softer and not as permanent."

An important part of the Stephens' method is close attention to the glass while it is soaking. Mr. Stephens recently built an enclosure for the outdoor racks which holds about 150 pieces at once. Perforated pipes trickle the water evenly over each item on the racks, and Mrs. Stephens removes each piece every other day to wash and polish it.

"It takes longer for our water to color glass," she explained, "but the finish lasts longer too. I think the soft hues of some of the old work were very beautiful, but they tended to rub off. It takes from three to eight weeks for us to color a piece."

Nobody seems to know exactly why the spring waters give glass such a colorful coating. Some skeptics have suggested that the color is just a sulfur or iron coating, but the Stephens know it's not that simple. A geologist from Rochester tested the water of another spring with the coloring property many years ago, but couldn't dis-

cover the water's secret. The best he could do was to speculate that the water has a magnetic quality which adheres the color to glass.

Modern science is currently having another crack at the mystery. The Corning Glass Center sent Mrs. Stephens samples of glass to color almost a year ago.

"They haven't solved the riddle yet," she said. "It can't be too simple."

Whether the product of magic or magnetism, the colors on the glass doubtlessly appeal to the eye. Last year Mrs. Stephens had to turn Christmas shoppers away from the door of their modest shop. She hopes to be able to satisfy the shoppers who want to buy this unique, local product this year.

"Many of the people who stop to ask us about the spring and the glass come from far away," she said. "I guess a lot of people in the area think it can't be too exotic if it's happening next door."

Although there are several other springs which can color glass, the Stephens are the only residents who take the time to work on glass.

The spring has become quite a hobby for Mr. and Mrs. Stephens. While Mrs. Stephens spends several hours a day caring for the glass, her husband has become so interested in the "back yard resource" that he gives talks to local clubs and organizations about it.

"It has really been fun for us," Mrs. Stephens noted. "We've read all of the books on glass we can find. It's fascinating! One of the things we've discovered is that the old types of glass color with more luster and brilliance. Also, water on colored glass varies with the color of the glass. We did a piece of black glass a short time ago and the effect was brilliant. There are a lot of things we haven't tried yet."

The scientists seeking the secret of the springs also have a lot of things to try.

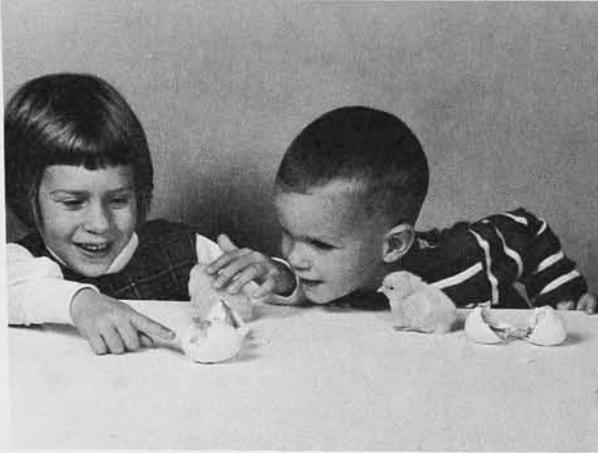
Although Mr. and Mrs. Stephens are anxious to find out just what it is that colors the glass, they must be a little apprehensive about having their mystery reduced to an equation. After all, not everybody has a little magic in their back yard.



Some finished amberized glassware.

CHILDHOOD IS A TIME OF INNOCENCE

Childhood is a time of innocence.



It is the morning of life when all is change and wonder.

It is a small world of pennies and wishes . . .

of sudden friendships . . .

and short sorrows.

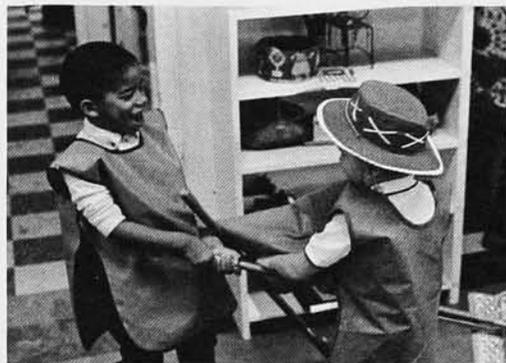


It is big stairs and small footprints.

A photographic essay based on the book of the same title by Joan Walsh Anglund. Pictures were taken mainly at the Cornell University Nursery School.



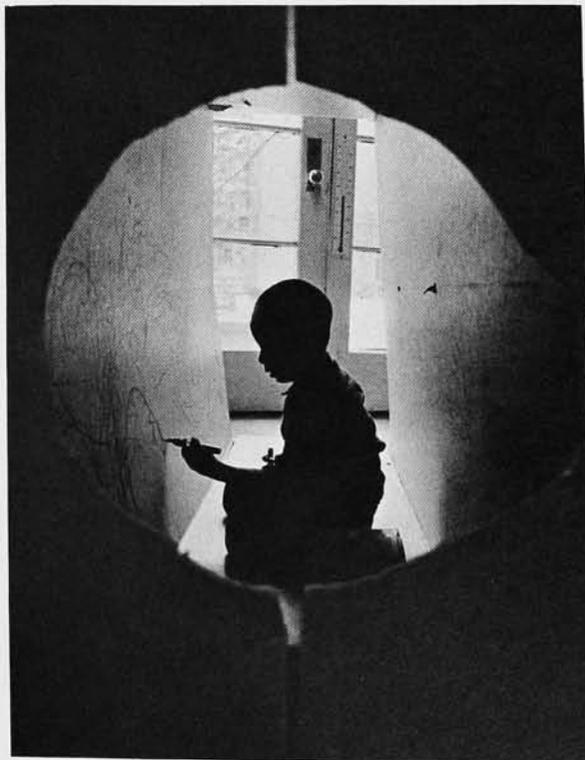
It is joy . . .



and laughter . . .



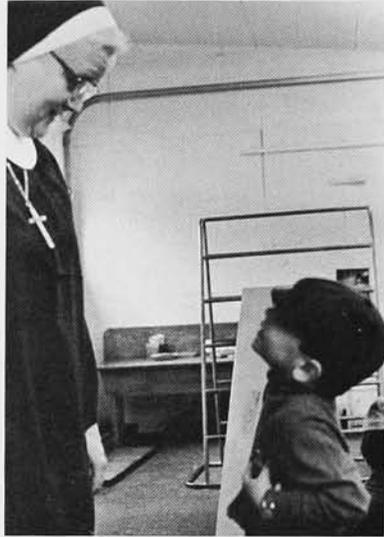
and make-believe.



*Childhood is a magic place of dreams . . .
where everything is possible and the best is
just beginning.*

Childhood is for exploring...

it is for running...



and reaching...

and touching...



and seeing.



*Childhood is when we are young.
It is the happy hour...
the passing dream...
the tender time of innocence that is a part of us
forever.*

CORNELL IN PERSPECTIVE

A PROGRAM FOR UNDERSTANDING

by Ronald Nehring '69

Fifty Cornell juniors received a letter last April from "The Office of the President" asking them to take part in *Cornell in Perspective*, a day-long briefing with University faculty and administration.

Robert Lurcott '61, the founder of the program, said its aim was to give students a realistic picture of the problems and progress of the University.

"Too many students see Day Hall as some kind of brooding octopus," Lurcott said. "They think if you pay homage to it once in a while it won't reach out and grab you. We have a communications gap to bridge."

Cornell in Perspective began with a meeting in the Board Room of Day Hall in early May. I attended the meeting as one of the students invited to participate. The decor of our meeting place seemed vaguely familiar until I realized that the walls were colored the same eggshell-pink so popular throughout the University.

Professor Urie Bronfenbrenner, who opened the meeting, set the tone for the program by saying that Cornell has traditionally been one of the most liberal universities in the United States. During the McCarthy era of the early fifties, he explained, Cornell was one of the few institutions to escape the "witch hunt" that accompanied the "Red Scare." If Cornell is to remain progressive it is essential, he concluded, that students know its inner workings and how to affect its decisions. For the rest of the day we were to learn how to "swing our weight."

The rest of the morning's discussion was revealing, complex, and sometimes astonishing. From the structure of the University's executive staff, as complex as the House of Stuart family tree, to the yearly budget (which is larger than Vermont's), Cornell is a vast and intricate institution.

Some of the resentment students always seem to feel for the administration had changed to appreciation and sympathy before the program was an hour old. Steven Muller, whom many of us remembered as a dapper and eloquent professor of government, spoke to us instead as University Vice-President for Public Affairs. Many of us had felt that a public relations job was a waste of his talents. We had not realized the scope of the problems

confronting the University. The budget alone is a monstrous headache for administrators. Muller pointed out that the budget may triple over the next decade without a parallel increase in funds. He said it was essential that alumni increase their donations to Cornell and that the state legislature begin to aid the endowed colleges as well as the "state schools."

Just as we were beginning to feel that Cornell's prospects were indeed bleak, Thomas W. Mackesey, Vice-President for Planning, sketched the future landscape of the University. It was beautiful. In coming years new dormitories will save many Cornellians from the cinder cells of University Halls. The new underground bookstore will be the finest in the nation. A stunning new art museum will rise to the west of Franklin Hall on the spot where Ezra Cornell told Andrew Dickson White, "This is the place where my college will be."

President James Perkins also addressed us, speaking about the unique role of the American university in society, a role related both to the great universities of Europe and the politically active campuses of Latin America. He said the American university must serve as both agent and critic of society. The unique value of *Cornell in Perspective* was illustrated aptly in President Perkins' informal comments about the problems of his office. He said the question of his position on the board of directors of the Chase Manhattan Bank had more facets than many students had realized. As a member of the board and as president of the United Negro College Fund, Perkins reasoned, he might influence acceptance of Negroes in the banking profession. He also admitted he had been attracted to banking ever since his father had been a small-town banker early in the century.

Personal insights and contact with the men who help keep Cornell running made *Cornell in Perspective* a successful program. All of us who participated came away with a better understanding of the depths of the problems confronting the University and a better conception of its tremendous potential. The communications gap had been bridged.

UNLIGHT IN A LAND OF SHADOWS

by Jeffrey Manfredi '70



In Maine, above and beyond that state's tourist attracting area, lives the last remaining community of a once-powerful tribe of American Indians. The Passamaquoddy Indians were sent here many years ago by the Federal Government. They live on the Pleasant Point Reservation, a barren, thumb-shaped strip of land that lies defenseless against the brutal, stinging force of Maine's "picturesque" sea coast. It was on this reservation — one hundred acres of wind-swept earth — that I spent part of my year as a Vista Volunteer. I had dropped out of Cornell for two semesters in order to work for this program. Vista is a domestic Peace Corps operation run by the Office of Economic Opportunity.

I went to Pleasant Point in the middle of March '68. The day that I arrived, the cold was bitter and the wind from the ocean pushed in an electric spray of damp salt air. The sun and the far reaches of the sky were hidden by a thick, menacing mattress of grey clouds. The powerful, constant force of the wind overcame the roar of the crashing surf. Except for a cluster of beaten, tired-looking homes and a few scattered automobiles, there seemed to be no sign of life.

Occasionally I would catch a glimpse of smoke, but as soon as it left the protective confines of a chimney, it was grabbed, pulled and scattered about in unrecognizable bits that only increased the gloom. As I stood on that unpaved, rocky road, shivering from the cold while sweating from the fear of being alone, I was only able to hope for the best, no matter what the best would turn out to be.

The first person that I met was Garfield Honer. He was a red-faced, dried apple-cheeked old man, whose sparkling black eyes were a barometer of his temperament. "Who are you? . . . Why did you ever come to Pleasant Point?" he asked. Without my ever really answering any of them, the questions continued. "Do you play baseball? . . . What position do you play?" He told me I would be welcome to try out for his team. That seemed to satisfy him and for a few moments the conversation ceased. Suddenly he continued, "This is a rough place sometimes. A lot of the boys drink too much and some of them can get pretty nasty — 'specially this time of the season when there ain't much else to do 'round here!"

"It wasn't always like that though," Garfield said, more to himself than to me. "We don't have much of our own anymore, 'ceptin' the dances. We need new homes, good water, a place for the young kids to go where they won't get into trouble, better education, some kind of industry." Then he stopped talking for a moment, shoved his knotty hands deep into his pants pockets, somewhat embarrassed at talking so freely to a stranger.

There was nothing that I could say. We both stood there on the road with a whole lifetime between us that I could never hope to understand. The cold seemed to increase, my eyes watered from the wind, but I was unable to raise a hand to clear them. "I am glad that you are here, Jeff. I am sure that we will get along well together," and then saying how he had to be getting along, he moved, then hesitated. "Go on over to the church," he said. "Father will give you a place to stay for the time being." He took a few steps, turned and nodded, then vanished into the haze.

I had already finished the meal he had given me before he told me his name. Father Leo O'Shea had been the pastor of Saint Anne's Church at Pleasant Point for six years. "It is a very religious community," he declared. "Almost all of the three hundred people on the reservation attend Sunday Mass, Wednesday Benediction, and Thursday Beano with great regularity. Most are very poor in material possessions," he added. It was my impression that he was telling me that their religion was the best thing they had and that he controlled it.

"What about the school I'll be teaching in?" I asked him. "It is a grammar school," he replied. "You will be working with and helping the nuns in their teaching duties . . . you may start tomorrow if you like."

I taught English, some arithmetic, and a little history, to the seventh and eighth grade classes. I was a novelty. The school was small and overcrowded. Teaching materials were either old and out-of-date, or non-existent. Many of the children, because English was their second language, found school extremely difficult.

I can remember the day Leon Altavator was sixteen years old. He didn't come to school. Leon had gone as far as the seventh grade, but he did not want to go any further.

Many times, Mrs. William Longfellow told me how her daughter, Katirri, had always loved to draw. Next year Katirri will go to the University of New Mexico to study art.

Robert Lewey, the seventh of sixteen children, never ceased to amaze me. He was much too tall and skinny for his eleven years. He spoke both Indian and English flawlessly. Many mornings he was up with the changing of the tide to help his father gather the catch from their fish weir. He read all that he could find, never putting anything down until he understood it.

The days passed by quickly. I moved out of the priest's mansion and into Garfield Honer's home. Garf and I together had one room. At mealtime it was the kitchen, in the evenings it was a den, a study hall, a conversation parlor; sometimes, when the materials were available, Garf made baskets, whittled letter openers, or small war clubs, and it became a workroom. Finally, when the lights were put out, it became our bedroom.

Garfield Honer was quite a guy. His broken, misshaped knuckles and nose were the souvenirs of his years as a prize fighter. He had fought when, as he told me, "Men fought with calloused bare fists . . . not like today where you have boys swatting each other with pillows." He was impressively bow-legged from the many years he had skated on outdoor ice as a semi-professional hockey player for St. Stephen's in Canada. He had a good, clean soft voice and a fast guitar that played songs full of a mixture of English and Indian lyrics. Sad and lonely, free and happy songs that I never heard before and perhaps will never hear again. He had traveled, worked and

The baskets are made in the same way that their grandfathers made them.



lived in many American states. But the ancient vibrations that try to draw each and every one of us back to our birthplace, had finally caught hold of Garfield Honer, and drawn him home.

The Passamaquoddies make beautiful baskets. Basically, they are of two types: one is more decorative while the other is called a scale basket. The scale basket is used by fishermen who save the scales of the fish they catch. The iridescence is removed from the scales for use in the cosmetic industry. The men still make these scale baskets in the way of their grandfathers. A six-foot-long ash log is first hammered with the flat side of an ax for about an hour, until the ash wood fibers loosen so that the basket maker can peel long strips of ash from the trunk. After one stripping, the pounding begins again and the same process is repeated until all the useful fibers have been removed. Ropes are strung between the rafters near the stove in a shed. Strips of ash are placed on those ropes to dry, since dry ash is flexible. The Passamaquoddy will then take the dry strips of ash and cut them to a roughly uniform width with a two-edged knife. He bends a dozen strips over a basket mold, and then weaves other strips of ash in and out of the upright strips, until the basket is woven.

The other type of basket is known as the sweet grass basket. It is made from marsh hay, some of which has been dyed various shades of blue, green, and red. These are very durable and all of them, with the use of dyed pieces, display various symbols and signs. The meaning of many of these signs and symbols has been lost and the fact that they have been lost is a sad part of American history.

The Passamaquoddy's language is very phonetic; not as refined, but then again, not as confined as English. To many of them, English is a very frozen language. "Willi-Wun" is a common word of greeting, while "Willi Wun Thatunka" calls for the sun to rest always upon the shoulders of one's friend. Nowadays, if we happen upon a friend who appears to be up against the wall, we tell him to cool it, not to get so hung up on anything. Basically, the Passamaquoddy would say the same thing, only I think he would say it a lot more beautifully. "Peski ktelapin elmi nelemwiwik (Your eyes seem to be following the stream of life) apatcyaye Ihope Tciotuk knimi-hisa kwilakweyn (someday you will see me there) nil nolpin nakanetlitumn pekholakn (beating the drum of peace) apotumkn muskatinte majaha petcui (my feet will be your feet and they will) K'tci epitwat lithasiu holamoosin metcslawei (help guide you through the troubled waters of life.)" Very rarely are they at a loss for words, but by the same token, they have not forgotten the language of silence. They, for all their misery, are very serious about life, all life: that found in the forest, that still unborn, that seen in the heavens, and that found only in the dreams of their wiseman. Theirs is not the language of a savage.



And his future?

Overall, life has offered the Passamaquoddies very few pleasurable alternatives. Financially, they are very badly off. Just as he has done with so many other Indian tribes in America, the white man has cheated, beaten, and sometimes killed the Passamaquoddies, in order to gain control of their land.

The state of Maine has set up a welfare system for them that is similar to the system in New York City, in that it seems to abuse, destroy, and dehumanize many of the same people it is trying to help.

Most of the middle-aged men have served in the armed forces. All are proud of the fact and all remain among this country's truest patriots.

Two weeks before I left, a nineteen-year-old boy from Pleasant Point was killed in Viet Nam. A week later, the casket containing his body arrived. He, like Garfield Honer, had finally come home.

During my year in VISTA, I saw scenes and faces and places in America that time will never wear away. It was a good year. I found parts of myself that I never knew existed before, ideals and values were both gained and lost.

For myself I accomplished quite a lot . . . for others I am not so sure, only . . . only in a way it's like what Garfield told me once when I was disappointed in myself for not being able to accomplish more: "There is always sunlight on the mountains, Jeff . . . while the trees below cast shadows that hide the forest floor."

ALUMNI

Open House for High School Students November 23

The Officers and Directors of the College of Agriculture Alumni Association, meeting in Ithaca on September 28, approved November 23 as the date for this year's College Open House for High School students. For several years, alumni have cooperated with the College in recruiting well-qualified prospective candidates for admission and in transporting them to the campus for a day-long visit. Student participants will have an opportunity to find out about programs available in the College, what graduates do, and admissions policies and procedures. In addition, they will visit informally with staff, faculty and students.

Alumni knowing of high school students who might be interested should contact John Spencer, Admissions Counselor, Roberts Hall, Cornell University.

Ag Alumni Make
Cornell News

Several graduates of the College of Agriculture have recently returned to Cornell or taken new jobs in the Cornell Community.

R. Peter Jackson, B.S. '54, M.S. '59, Ph.D. '67, has been appointed Registrar at the University. He succeeds H. H. Williams who retired. "Pete" hails from Castile, New York and has held a number of posts at Cornell. He was an Agricultural Extension Agent in Montgomery County in 1956-57, Admissions Counselor in the College of Agriculture from 1958-1960, and University Assistant Director of Admissions from 1960 to 1965. Until his appointment as Registrar, "Pete" was Director of the Office of Institutional Studies.

Richard A. Church, B.S. '64, is Administrative Assistant in the Dean's Office in the College of Agriculture.

After graduation from Cornell, Dick took over management of the family farm near Moravia in Cayuga County. While a student, he was president of the College of Agriculture Student Council, member of the Executive Board of Student Government and in Ho-Nun-De-Kah, senior honorary. In 1959-60 Dick was President of the New York State Future Farmers of America.

Frederic A. (Ben) Williams, B.S. '50 has returned to Cornell as Coordinator of University Regional Offices. In this position he works with Vice President for Public Affairs, Steven Muller. Previously, Ben was Administrative Officer for Cornell's contract program (AID) in Liberia and Assistant to President Malott. Before coming to Cornell, Ben was with Marine Midland of Central New York with offices in Syracuse.

Gordon L. Peck, B.S. '62, M.A.T. '68 has become an Assistant Director of Financial Aid. Most recently Gordon was teaching Science at George Junior Republic in Freeville. He came to Cornell originally from Elnora, New York in Saratoga County and was a graduate of Shenendehowa Central School.

THE COUNTRYMAN proudly salutes these graduates of the College on their accomplishments and wishes them every success.

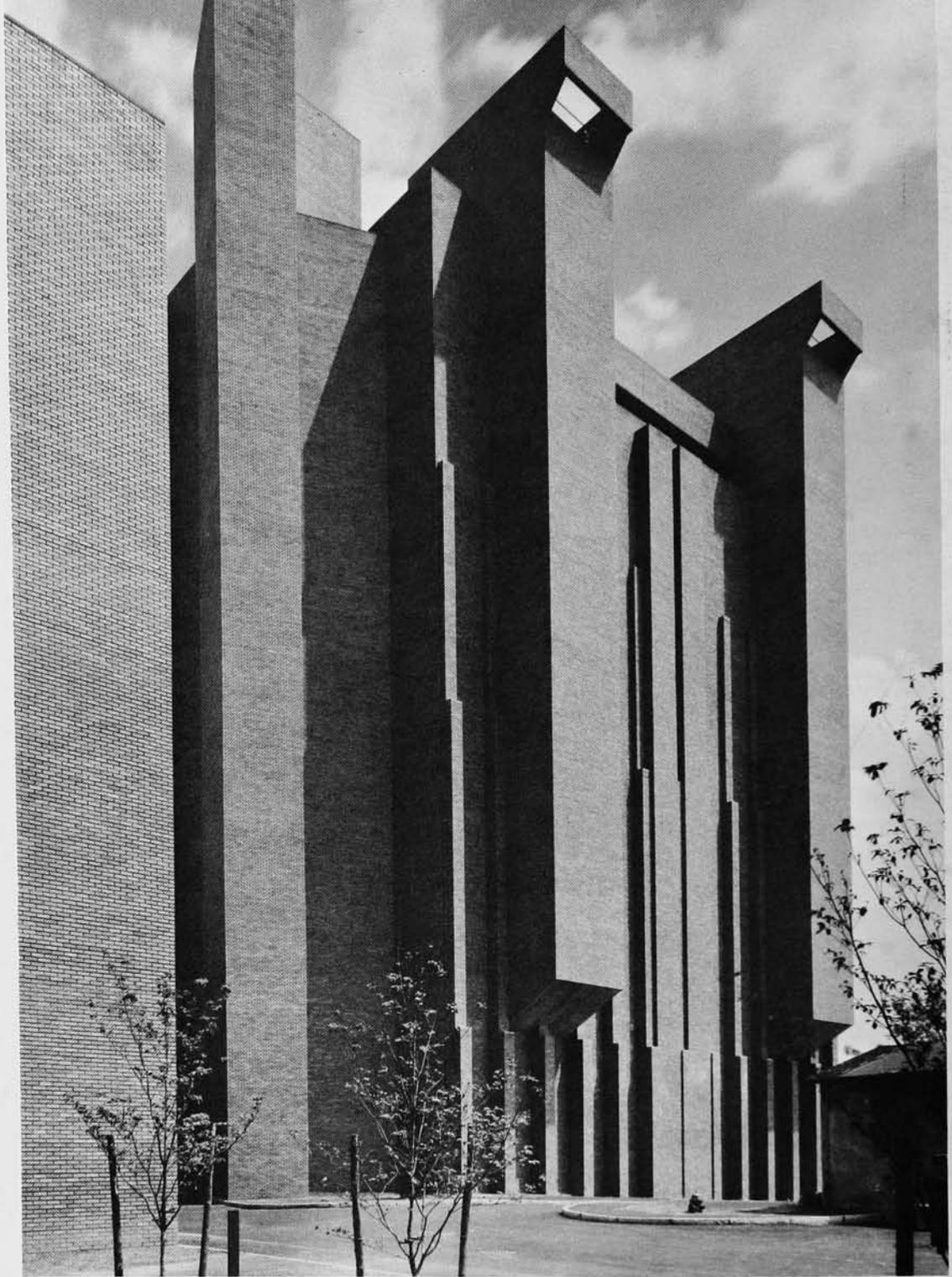
HO NUN DE KAH HONORS SCHOLARSHIP HOLDERS

Approximately 1,000 students and guests gathered for the Twenty-Second Annual Ho Nun De Kah Barbecue on October 8 to recognize scholarship grantees and recipients. Director H. L. Everett, resident instructor, said that the grand total of financial aid to students enrolled in the College amounted to approximately one million dollars through scholarships and awards and some \$400,000 in student loans.

Dean Charles E. Palm was the principal speaker. Excerpts from his remarks included: "Recent events in this nation have made us fully aware of the great social change that we, as a people, must face, at home, and as a part of the world community. Modern agriculture, for example, has achieved its highest level of advancement in the United States, but many of the processes that brought this about have resulted in the initiation of changes that added to our social problems. . . . We are seeking to understand the ways to communicate with men and women in all walks of life. Once we can do this, it is easier to find others who will participate in identifying the problems and participate in their solutions. . . . I believe the land-grant universities established more than a century ago, and particularly their colleges of agriculture, have demonstrated the value of active participation in dealing with the problems of people. Our whole concept of teaching, research and extension deals directly with a philosophy of service to society that has been fundamental to the development of this nation. . . . Education's vital role in making possible new solutions to old problems looms brighter every day. Those of you whose active careers will extend well into the 21st century will be the architects of many of these important developments. . . . We must do our utmost to create an environment where the excitement and the rewards of progress are commonplace, where students who are able to achieve their priorities and their potentials and, in turn, bring maturity into action as they help nations to achieve their potential.

PICTURE CREDITS

Cover — Jeffrey Manfredi; pages 3, 6, 8, 9, 10 — Communication Arts Department; pages 4 and 5 — Cornell University Archives; page 7 — Mike Hogan; pages 12, 13, 14 — Jeffrey Manfredi.



The new Agronomy Building (Bradfield-Emerson Halls) dominates the Cornell skyline. Dedication ceremonies will be held December 5, 1968. Bradfield Hall, the 13-story tower, is devoted to research and graduate teaching in soil-related biology. Emerson Hall, the four-story connecting L, houses the undergraduate and teaching laboratories and administrative offices. Architect Ulrich Franzen has won national recognition for his practical and imaginative design.

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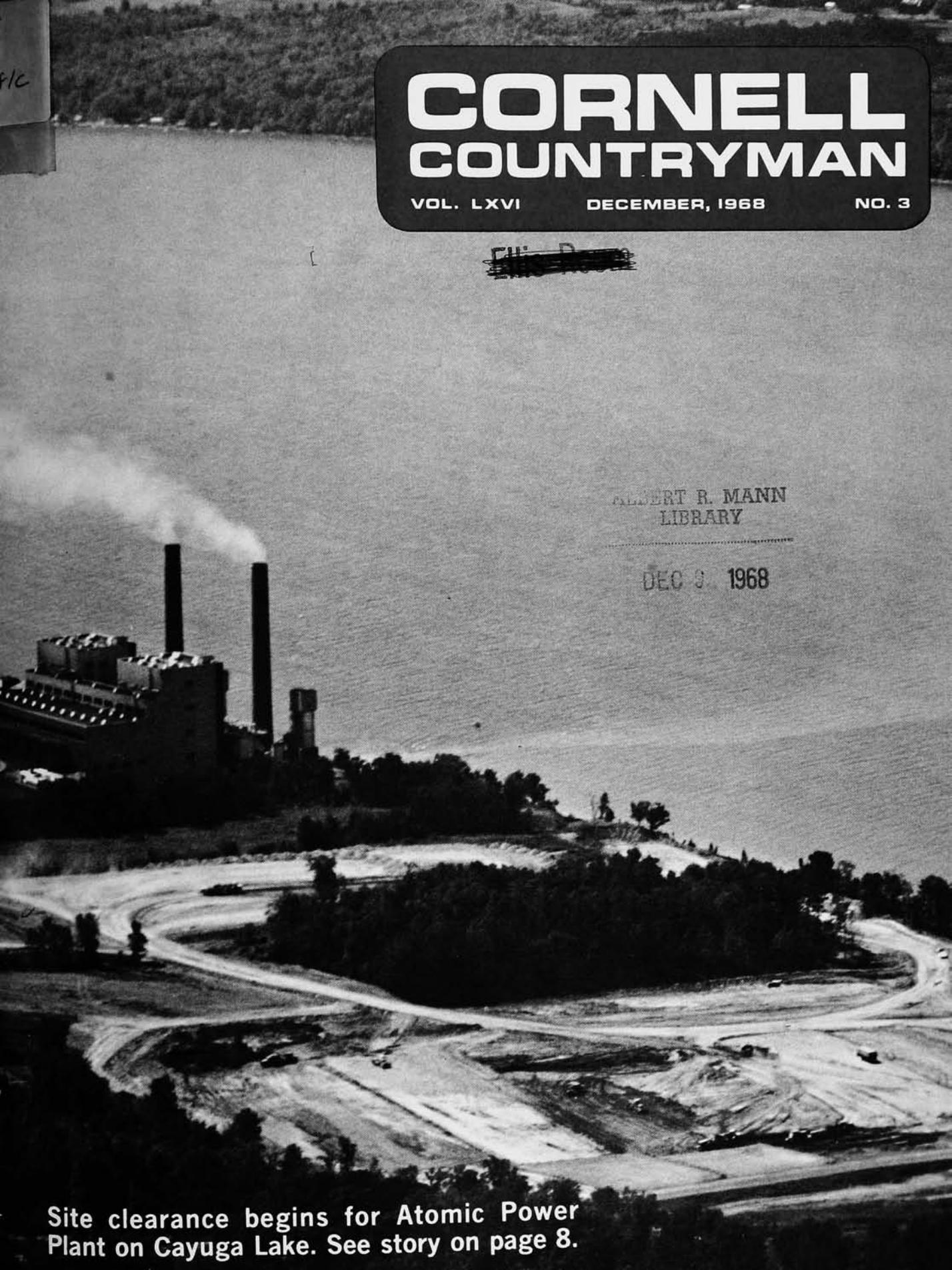
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Site clearance begins for Atomic Power Plant on Cayuga Lake. See story on page 8.

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The Guidance Office:

Aiding The Undecided

by EDWARD FISHER '70

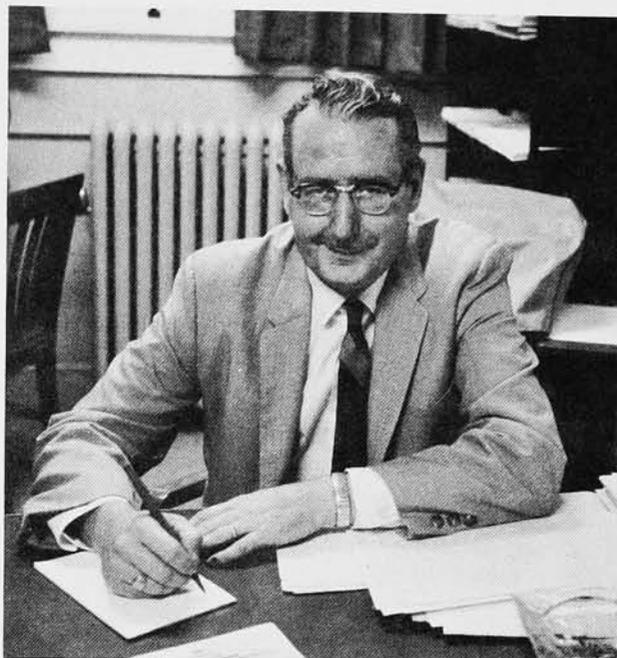
Attempting to define one's academic or vocational goals is one of the major reasons for pursuing a college education. However, there are many students who, after perhaps a year or more of study, find that they are not quite satisfied with the objectives they had previously set for themselves. Here at Cornell there is a service offered that attempts to aid students who find themselves in such a situation. Those who know their academic difficulties, are also able to take advantage of the service offered by the Educational-Vocational Guidance Office.

Many Cornellians have taken the climb up to 301 Stone Hall, where the guidance offices are located. Under the direction of Dr. Howard G. Andrus, a vigorous attempt is made to help these students solve their problems. Let us see how one of these perplexed individuals, searching for a major area of study or fed up with his present one, can utilize the help offered by the service.

Before the actual testing begins, the student should visit the office to make an appointment and fill out a Background Information Form. This form enables the counsellor who will work with the student to acquaint himself with the particular situation.

The initial hour-long interview, which usually takes place about a week later, helps the counsellor to further acquaint himself with the student and his problem. During this hour, the exact nature of the problem will be brought into the open. Discussion will center around the student's interests and abilities, including an examination of his academic records, both in high school and college. This interview will often end with the counsellor asking the student if he still wants to go through with the testing and guidance conferences, for no guarantee of a final solution is made, and at times the testing can become rather rigorous.

Should our confused Cornellian decide to undertake the task, the individual counsellor will decide which of the available interest, aptitude, personality, and achievement tests will be taken. Not everyone using the service takes the same tests, or even the same number of tests,



Dr. Howard G. Andrus

for each individual situation is considered to be unique. As few as three and as many as eight hours of testing may be prescribed. Appointments to take these tests are then made.

After the tests have been administered and the results tabulated, their significance will be interpreted in several hour-long conferences between the counsellor and the student. These sessions are the crux of the entire process. The individual might be shocked by the results of the tests, but now he must be willing to undergo some serious self analysis.

Not only are the tests themselves interpreted, but the results are coordinated with other background information that has been obtained during the conferences. In this way, the counsellor and the student are made aware of exactly what the situation is and what possible solutions, if any, are appropriate. It is to be stressed that no final answers are promised.

It is often advisable that the student ask his parents to visit the Guidance Office so all three parties can objectively discuss the situation. In many instances the student's parents are quite divorced from the events which are influencing their child's college experience.

When it is all over, with ten to fifteen hours of combined testing and counselling, and two to four weeks elapsed since that initial interview, hopefully a solution will have been found. No matter what the outcome, however, the student who has taken the time to use the service will now know a great deal more about himself than he thought possible. For the nominal fee that is charged by the Guidance Office, it usually turns out to be a valuable investment.

From Peru To Nova Scotia –

Students and Community Development

by **DIANNE NOVAKOUSKI '69**

Have you ever considered spending your summers working as a teacher of semi-literates or as an agricultural extension aide, or working in a health clinic of a developing country? Were you satisfied with the job you had last summer or do you think you might like to try something exciting and different?

The benefits of such work range from free room and board (guarantee of a roof, a sleeping bag, and all the tortillas you can eat), to a chance to travel in a foreign country (by foot, burro, mule, or jeep). The qualifications are the ability to speak the language of the country you will be working in, some knowledge of the goals of community development, and numerous related skills such as being able to take the temperatures of unwilling children, sleeping through the crowing of roosters at 3 o'clock in the morning, and building fences around experimental vegetable plots. Such experiences can be good training opportunities for anyone interested in a future career in community development, (or teaching volleyball, improvising frosting recipes, jumping over brooks and rivers).

This type of summer job may not add much to your tuition fund but it will give you contact with another culture, an experience you will never forget, and perhaps the desire to work on research in a developing country. It may also be possible to use the experience you can gain in such volunteer work to fulfill a practice requirement, depending on your field of study. Students in rural sociology or some specific aspect of agriculture can find work in a rural village of a developing country particu-

larly applicable to their studies, and possibly, even majors in education, child development, or food and nutrition may be able to get some practice in their chosen fields.

Many Cornell students have participated in summer service projects outside of the United States, sponsored or aided by such organizations as Cornell United Religious Work and International Volunteer Services. The Cornell Brazil Project during the summers of 1964-66 sent Cornellians to work with Brazilian university students on community construction projects in villages of Northwestern Brazil.

Another project that the College of Agriculture participates in is the Mexican Project sponsored by students of LeMoyne College in Syracuse, New York. For the past six summers LeMoyne students, together with medical students and specialists from other colleges, have been doing agricultural, medical, educational, and community development work in remote Mexican villages. During the second semester each year, two to four students from LeMoyne have entered Cornell through a special one-semester program coordinated by Cornell's Professor Howard S. Tyler, Resident Instruction. Courses in rural sociology, economic development, vegetable crops, Latin American history, international communications, and intensive Spanish have been helping to prepare them for summer work projects in the Mexican mountain villages.

One aspect of the community project is the planting of experimental gardens with seeds donated by the vegetable crops department at Cornell. The purpose of these

plots is to introduce new vegetables into the diets of the people whose foods are usually only tortillas and beans. Dr. Philip Minges, Vegetable Crops, after a trip to Mexico to examine the state of the agriculture there, reported that "rural people do not use vegetables. They need to be educated in the production and use of these foods." This education is within the capabilities of a short-term summer student project and therefore has been a part of the program in Mexico.

In order to introduce vegetables such as radishes, carrots, cabbage, beets, Swiss chard, lettuce, or peas, the students plant gardens near the village schoolhouse. This arouses the curiosity of some of the villagers and their families. If they say they would like to plant a garden of their own, the students help them prepare the ground, plant the seeds, and build a fence around the plot. Constructing a strong impermeable fence is quite important since one of the chief calamities that can befall a garden is to be overrun by local cows, mules, or pigs. The students also give the women instruction on how to prepare these vegetables once they are ready for harvest.

Besides providing the students with seeds and some agricultural experience, Cornell also helps give a sociological orientation to this essentially amateur community development project. The students' activities and methods are usually based more on goodwill than on scientific or sociological principles. Dianne Ireland, LeMoyne '68, project leader during the summer of 1967, was enrolled in a graduate course, Applications of Sociology to Development Programs, where she became familiar with

the theories behind inspiration of community action.

Of course, no amount of training, at Cornell or anywhere, can totally prepare a student for summer work in a developing country and foreign culture. For instance, carrying a candle to the latrine on a rainy night after the supply of flashlight batteries has run out, or discovering how to work a lantern so that boys who want to come to evening classes will be able to read are talents which American students do not expect to need for their "summer jobs" as temporary "change agents." But one coed comments that living at Cornell does help one develop some of the minor skills and abilities necessary for summer work in rural areas. "Daily morning hikes up the back steps to the ag quad are excellent for developing mountain-climbing endurance."

So it is not too early to begin thinking about your summer work for next year. Especially if you will have to begin learning a new language, the time to start is now. And it also will help you if you begin studying the culture of whatever country you plan to work in as well as elementary principles of sociological development. CURW will be recruiting volunteers for projects in countries from Peru to Nova Scotia in the first part of the spring semester. People interested in LeMoyne's Mexican Project can contact Susan Durisek '72, who originally came to Cornell for one semester but decided to stay, in order to concentrate her studies in agricultural economics.

If you begin preparing for your summer work now, you may even be able to ignore the trials of the long Ithaca winter ahead.

Mexican women wait outside student staffed health clinic.



A NEW TOWER

The sight of a castle in the distance, ablaze with herald flags, probably caused many a commoner to stare in wonder at its size and majestic aura. The powerful impact of so dramatic a structure must have been enhanced if the viewer noticed the absence of needless frills among the multitude of towers and battlements. Cornell's new Agronomy Building, to be formally dedicated at the end of this year, is remarkably similar to a baronial castle; serving a pressing need with a complex but totally functional design.

Where only two years ago quiet graystone buildings slunk unnoticed on Tower Road toward the Veterinary College, now the Agronomy Building (more correctly known as Bradfield-Emerson Hall) provides an anchor point linking these structures to the rest of the Agricultural Quadrangle. Bradfield Hall, thirteen stories high, contains offices and research laboratories. However, there are a number of classrooms on the first floor as well as a meteorology lab and the Agronomy library on the top floor. Emerson Hall, located to the north of the tower and connected to it by a common main entrance, com-



Bradfield-Emerson Hall

bins a two-story administration wing with a four-story undergraduate teaching lab devoted to crop and soil science.

Despite the tower's seeming aloofness when viewed from a distance, a closer look reveals a remarkably smooth transition between styles. The designing architect, Ulrich Franzen, seems to have done as much as possible to achieve both functional and visual connection between his construction and the existing campus. The main entrance facade, facing the east, combines with Fernow and Rice Halls to form a mini-quad bordered by Tower Road. Emerson and Fernow are directly linked by a two-story covered passageway, while the existing arcade through Mann Library combines with a ramp leading to the tower's back entrance. Parking areas, both old and new, are shared by all adjacent buildings and utilize common exits, in the interest of conserving space. Emerson's height and location are intended to create a visual flow from the main quad to Bradfield Tower.

In designing such a demarcating and important structure, Franzen has demonstrated a theory formulated by Louis Sullivan and developed by Frank Lloyd Wright, that is, 'form follows function.' During a recent interview, Franzen stated, "People assume that all lab facilities should be more or less alike. Actually, the exact opposite is true. The specific mission of these labs was to serve research in biology, chemistry, bio-chemistry, plant breeding, and genetics. So they had to accommodate a great variety of equipment and lab arrangements."

To provide the optimum solution to the problem presented by such intended diversity, Franzen created a stacked series of independent floors, each receiving air-conditioning from a main duct running along the ceiling of the single north-south corridor common to all levels. The other utilities and vents are contained in the numerous protruding external columns unique to this high-rise lab.

The conditioned air, both warm and cold, comes in through large intakes on the ground floor and is passed through mixing boxes before entering each lab. Desired temperatures may thus be maintained without any influence from conditions outside the building. Exhaust gases are expelled through external venting tubes which culminate in the four prominent towers on the roof. Each

ON TOWER ROAD

by W. T. CONINE '70

tower is topped with a fan to propel fumes over 300 feet into the air, aiding in their dispersal.

From the risers on the outside walls, pipes for water and gas enter each floor through 18-inch-deep channels formed by T-shaped concrete beams located between levels. The channels, visible on the ceiling of each room, are completely accessible for service, as are the trunk shafts, reached from narrow passages within the east and west walls. Since the internal dividing walls carry no continuing utilities, they could be arranged to exactly fit projected floor space designs, which, with the exception of the common corridor, differ from level to level.

Although the entire exterior of the unit was finished in rough concrete, Franzen decided to cover everything with a very distinctive dark-orange brick. He explains, "Exposed concrete looks fine when the sun is out and you get dramatic contrasts. But on a dull day, the light color of concrete tends to flatten out. This dark brick always gives you contrasts between surfaces."

Of course, with the utility passages covering the outside walls, none of the labs or offices in the tower have windows. While this has perhaps stimulated the growth of a large number of paintings, charts, photos, and bulletin boards that are appearing all over the interior walls of the building, many people working there are thankful for the extra wall space and the absence of another variable in their experimental conditions. Some do miss the light and air, but attractive sunken lounges are provided at the southern end of each main corridor, except on the top floor. The tremendous view, which incidentally should be seen by everyone, and the comfortable chairs, create a fine area to relax in during the day.

In the July/August issue of *Forum* magazine, Peter Blake writes, "... the [Agronomy] building turned out to be a beautiful as well as efficient machine." Certainly no one could dispute its mechanical qualifications. As a fine-edged tool it stands ready to perform its intended mission.

The castle analogy returns as one moves through the tower. Brick is everywhere, on the floors and walls, in columns that block any advance view of the lab doors by someone walking down the corridors. The small, round doorknobs and heavy doors belong on a vault, or so it seems. One gradually becomes aware of a constant

rush of air and can almost feel it moving from vent to exhaust. The feeling brings back some memories of high ceilings in a child's dark bedroom on a windy night—all this in the middle of test tubes and centrifuges.

Bradfield has received the usual personal touches from almost everyone with a room there. The orange, brown and white finish of the halls is complemented by Indian corn and pumpkins. Bottles of fruit flies, boxes of soil samples, even a collection of softball bats await storage in the rooms. Over half of the lounges already have some form of plants seeking the transient sunlight.

The building seems to promise that great order and success will come from the early state of minor confusion. When asked how soon all of the marvelous equipment would be in operation, a graduate assistant replied, "I don't really know." Then he added with a smile, "My part is starting right now!" Clearing aside a pile of wire, he lit a bunsen burner and began to work. In any case, it won't be long until this coordinated statement of architecture and science is fulfilling its promises.



Tunnel-like corridors of Agronomy Building.

Power Without Pollution?

by MIKE HOGAN '69

A group of Cornell scientists are playing important roles in a controversy that may affect the future of Cayuga Lake. The New York State Electric and Gas Corporation (NYSE&G) has started site clearance for a nuclear power plant proposed for the eastern shore of the lake. Cornell staff members are involved in several efforts to ensure that the plant will not harm the environment.

Associate Professor Alfred Eipper, a fishery biologist in the Department of Conservation, said he thinks scientists have a responsibility to contribute to public decisions affecting the environment.

"We have an obligation to make information available to people about complicated resource problems," Eipper said. "Most of the problems in resource allocation today are very complex."

Eipper and 16 other Cornell staff members recently published an independent bulletin warning of possible thermal pollution of the lake by the proposed "Bell Station." He said a primary aim of the bulletin was to awaken the public to possible dangers to the environment.

"It's essential that decisions as important as this be multi-based," Eipper commented. "The company is doing research on effects, but their attitude isn't completely open-minded. We aren't fighting against the plant, but to make sure that adequate safeguards are included."

NYSE&G has described the proposed plant as "a light water reactor with a net capability of generating 830,000 kilowatts." The utility company already operates a conventional coal-fueled generating plant on Cayuga Lake. Known as Milliken Station, it has a capability of 290,000 kilowatts and is located about 16 miles north of Ithaca. Site clearance for the proposed facility has started adjacent to the Milliken Station.

Present plans for the nuclear generating station assume lake water will be used in a cooling system for the reactor. NYSE&G has said the plant will take approximately 500,000 gallons of lake water per minute at a depth of about 100 feet, cycle it through a condenser, and return the water to the surface of the lake. The water would be taken in at a temperature of 45 to 50 degrees F. and returned at about 70 degrees F.

The bulletin published by the Cornell staff members warns that the system described by the utility company

might have serious effects on the "primary values" of Cayuga Lake.

According to Professor Eipper, the lake is "thermally stratified" during the summer months. From early May until late October, Eipper explains, the lake is separated into two distinct layers of temperature and density, and there is very little mixing between the layers.

One effect of the large input of warm water to the lake would be to lengthen the period during which the lake is stratified, the scientists say. They warn this might have serious effects upon the ecology of Cayuga's biological system, since biological production (mostly aquatic plant growth) depends upon the stratification of the water.

The bulletin emphasizes that biological production can only take place in the warm upper layer of the lake, where solar energy can reach organisms. If the lake is stratified longer, the scientists say, the growing season could be extended up to five weeks.

The scientists also warn that the water brought into the upper layer would contain nitrate and phosphate nutrients critically important for plant growth. Organic production would thus be further stimulated. The scientists say the process of organic enrichment of a lake, known as "eutrophication," is self-accelerating and irreversible. In extreme cases, accelerated eutrophication in lakes has resulted in lake water looking like pea soup. Although the scientists say effects like this are improbable in Cayuga Lake, they maintain that the lack of knowledge about the problem should restrain the utility company.

James Minehan, director of news services for NYSE&G, said the utility itself was "very concerned" about the possible effects of the power plant on the environment.

"We have already committed over half-a-million dollars to research on the problems involved," Minehan said. "We have contracts with the Water Resources Center at Cornell and with Cornell Aeronautical Laboratory (CAL) to study both the physical and organic elements of the problem."

Minehan said the power corporation had indicated many times that it would do nothing to damage the environment.

"We will do nothing to harm the lake," he said, "even if we find that the plant shouldn't be built."

Dr. T. R. Sundaram, a CAL engineer involved in

Cayuga Lake research, described the engineering problems in the study as extremely complex.

"The individual aspects involved in studying any lake are different and crucially important," Sundaram said. "We should be close to some answers by March, when the study project ends."

Professor Eipper warned that construction of the plant should be based on long-range studies of effects, so that all important facets be included.

"Nobody can say what the complete effect of a power plant on the environment would be," he said, "and this is what we are trying to get across. Decisions as significant as this can't be based upon a single year's study. People have been studying various aspects of Cayuga Lake for almost 50 years, and there are still a lot of unanswered questions."

David Comey, executive director of the Citizen's Committee to Save Cayuga Lake, was also emphatic about the need for enough information on the problems involved.

"It's important to understand we aren't fighting the plant itself," Comey said. "If we started to talk about radiation in the environment and that kind of thing, we could generate enough public sentiment to prevent it from being built. Actually, we are in favor of the plant, provided safeguards to citizens and the environment are included."

Comey said citizens would have an opportunity to voice questions about the plant at hearings to be conducted by regulatory agencies. In order to build and maintain Bell Station, the utility company must obtain permits from several groups. The most important permits are construction and operation licenses from the Atomic Energy Commission (AEC) and a sanction of environmental effects by the New York State Health Department.

NYSE&G News Director Minehan said he thinks licensing acts as an effective safeguard for the public. "There's no question about it," he said. "These agencies were established precisely for this reason. Both the AEC and the State Health Department are certainly responsible, and the permits that these agencies issue are pivotal in importance."

Another issue involved in the controversy over the plant is the question of site clearance. Comey said the utility had spent over two million dollars in clearing and preparing the site for the plant, and charged that the attitude of the company was "ambiguous."

Carlos Stern, a doctoral candidate in conservation at Cornell, said the work on the location for the proposed plant might act to prejudice the decisions on permits.

"It's strange the company has invested this much in the site," he said. "If the cooling system as proposed is shown to be unacceptable, it would be economically infeasible to locate the plant here. The utility can

point out that it has a great deal at stake in the present location."

Minehan described the work on the site as "a calculated risk," saying that completion of the plant on schedule, assuming that permits were granted, was an economic necessity. He emphasized that actual construction could not begin until an AEC permit was received.

Minehan also said the bulletin issued by the Cornell staff members was unclear in several places.

"They have a duty to make their skills available to the public," he said, "but I think it's sometimes hard to separate the known from the possible in their pamphlet."



Foundation work begins on proposed power plant.

Assistant Professor Clarence Carlson, one of the authors of the bulletin, said another group of scientists would issue a second bulletin in early December, dealing with possible effects of discharged radioactivity on the environment.

"The first paper stimulated a lot of thought," Carlson said. "This was really one of the primary purposes. We're doing a sort of Rachel Carson thing. The more information available, the better. If we can get the power company to examine the effects of the plant critically, we will have accomplished a great deal."

The scientists involved in studying and reporting on Cayuga Lake have accomplished a great deal. The citizens who may be affected by a new power source on the lake have learned vital facts about the problems involved. The utility is taking steps to study effects of the proposed system. Cayuga Lake will probably remain "the foremost natural resource of the region."

CIVITAS —

Cornell Students Lend a Helping Hand

by **BOB POTTER '69**

I really had no idea what to expect. My instructions were simply to meet with the target group and establish a good working relationship. If I failed there would be no one else to share the blame. If I succeeded I would receive very little praise.

A spy mission? No. Some underworld dealings? Hardly. This is the way I met fifteen fourth graders at the Fall Creek Elementary School through my work in CIVITAS (Cornell-Ithaca Volunteers in Teaching and Service). Once each week I run an after-school athletic program for these boys who otherwise would have none. This is just one small example of how CIVITAS, certainly one of the most worthwhile organizations on the Cornell Campus, is helping the people of the Cornell-Ithaca community.

Over 500 Cornellians like myself donate an hour or two each week to what we consider a most rewarding activity. We don't get paid and there are those who would berate our efforts, but we find it very worthwhile to know that we are "doing our bit" for the betterment of our adopted community. As far as concrete rewards go, there aren't any. If the smile of an eleven-year-old, or the friendship of a patient at Willard State Hospital isn't enough for you, then perhaps you wouldn't be interested.

There is no one typical CIVITAS project. The work the volunteers do varies as much as the distance they have to travel. The Fall Creek School is a five-minute walk from campus. Those who travel to George Junior Republic to run clubs in dramatics, sports, and crafts have a thirty-minute drive. Each volunteer is ordinarily given only his assignment and the times he should be there. After that it is up to the individual as to what goals are to be achieved and, also, to determine the best method of reaching these goals. Thus the burden of continuing the program from day to day and from year to year depends upon the individual volunteer.

Although so much emphasis is placed on the individual, the CIVITAS office in Annabel Taylor Hall handles the administrative work. Requests for volunteers come to this office which then contacts the appropriate one of the thirteen projects. Three of these projects have al-

ready been mentioned, but a fourth also deserves attention as it has achieved a high degree of success.

In this project, Ithaca Tutorial, over 100 Cornellians each tutor a student from the local public schools. The tutors meet with their pupils twice a week to help them with their schoolwork and motivational problems. This project, like four others, outdates CIVITAS itself. The Tutorial program began in 1961 as an outgrowth of the Civil Rights Movement. The Mental Health project, where volunteers read to and provide recreation for the patients, has been going since the 1940's. But these efforts were decentralized and their effectiveness suffered from a lack of organization. So, in late 1964, the much needed change took place.

At that time several concerned students met to determine the fate of such student volunteer projects. The resulting reorganization formed CIVITAS and lent a new dimension to campus volunteer programs. Each year since 1964 the original numbers of five projects and 150 students have increased.

According to the Coordinator of CIVITAS, Tom Selz '68, more projects could be started if more students would donate their time. Right now the projects emphasize social service. Selz would like to see future activities oriented more towards social action. Examples of areas where the need is greatest are housing and migrant labor.

Although few will deny that CIVITAS enjoys immense success, Selz confessed that the problems it faces are very real. First of all, it is very difficult to operate within the confines of a \$3,000 budget and still do all that the group would like to do. This money is allotted to CIVITAS by Cornell United Religious Work. Also, transportation is a definite problem. Many of the projects take place outside Ithaca and the four cars that CIVITAS owns are not enough. While both of these problems are irksome, neither poses a threat comparable to the third, which results from human nature.

Selz has found that occasionally the volunteers are received with resentment as local people sometimes feel that Cornell students have encroached into their domain. This problem is not apt to occur with the kids or with the agency involved, but most often with the parents of the children involved in CIVITAS efforts. Selz sees this problem rooted in suspicion and feels that the best way to overcome this obstacle is by gaining the confidence of a few of the more influential parents and letting them sell CIVITAS to the others.

These problems notwithstanding, there is no doubt that CIVITAS will continue to grow in fulfilling its aim; servicing the people of the Ithaca area. In the time of four years it has doubled its programs and tripled the number of students participating. But most important of all, it is gaining acceptance for what it is: a volunteer organization that wants to lend a helping hand.

The New WVBR

by GARY S. FISHER '70

There is something new in the air over Ithaca. WVBR-FM, the "Voice of the Big Red," is filling the air over Tompkins County with 3,000 stereo watts of contemporary music. In a concerted effort to better serve the Cornell and Ithaca communities, WVBR and WVBR-FM are now providing the Southern Finger Lakes with contemporary music, American FM Radio network news, and items of local interest—all integrated into a new and exciting program format.

Recall how integral a part of your high school life radio was. Through today's refinements of Marconi's invention, you heard your favorite tunes over and over, received comprehensive news and weather information, and heard many play-by-play accounts of sporting events. Did you ever notice how little contact you have with this broadcast medium here in Ithaca? Did you ever stop to think why you hardly ever turn on a radio while at Cornell? The answer, simply, is that until now, there hasn't been a big signal station in the area geared to the tastes and needs of college students. WVBR-FM, however, is rapidly filling this gap in listener demand with its "FM Revolution."

Perhaps a little background about WVBR is in order so that you can better appreciate the station's achievements in collegiate broadcasting. Stations WVBR and WVBR-FM are completely independent of the university and have always remained free from university restriction and supervision. Instead, the stations are owned and operated by the Cornell Radio Guild Incorporated, a non-profit corporation of Cornell students. WVBR receives no financial aid whatsoever from the university and, in fact, pays rent on the studios and offices it maintains in Willard Straight Hall. The stations operate on a strictly non-profit basis and any annual assets or accruals are spent on the stations themselves in efforts to improve equipment and facilities.

Each autumn WVBR launches a well-organized competition program designed to attract interested students to the station and to inform prospective staff members of the opportunities available for creative expression. Station competitors subsequently study and learn about their chosen area of concentration under an experienced staff member's direction.

WVBR is a campus-restricted AM radio station which, up until this fall, featured almost exclusively "Top 40" rock and roll programming 18 hours a day. The station broadcasts to the Cornell community through the use of



WVBR control room for 1968 election coverage.

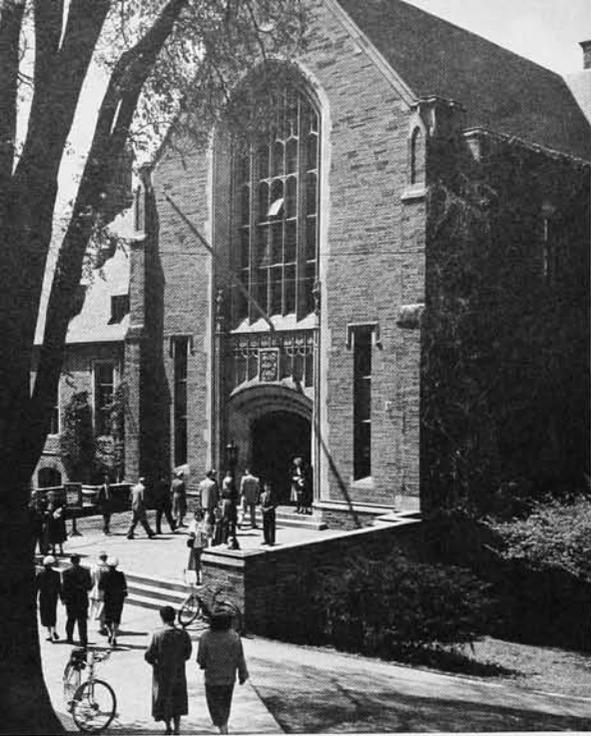
strategically placed transmitters throughout the campus and colleegetown. Each of these transmitters radiates WVBR-AM's program signal for several hundred feet in all directions and thus continuous coverage of the university and colleegetown is achieved.

WVBR-FM is a 3,000 watt FM radio station that broadcasts in stereo and covers all of Ithaca as well as the surrounding towns. Until this fall, WVBR-FM had been programming primarily classical music throughout the week, with limited contemporary, folk, and jazz programming on the weekends. The station's transmitter is located upon Hungerford Hill, about three miles southwest of the Cornell campus. WVBR-FM is subject to all the rules and regulations of the Federal Communications Commission and is a professional licensed broadcasting station.

The popularity of WVBR-FM's "Saturday Organization," as its weekend programming of contemporary music was dubbed, proved to be one of the deciding factors in the station's format change. Other considerations were finances and listenership. The Cornell Radio Guild felt that WVBR-FM would serve a greater number of Cornellians and also Ithaca residents by programming what is known as "contemporary" music. Throughout the spring term of 1968 at Cornell, controversies and debates concerning the relative merits of classical versus modern music formatting raged over the air as well as in the pages of the *Cornell Daily Sun*.

And now WVBR-FM has joined a growing number of FM stations across the land that broadcast contemporary music. This is the first time that such programming has been made available for the people of the Southern Finger Lakes region. In addition, because of the technical capabilities that FM radio can offer, much of the station's music is being broadcast in stereo.

Contemporary music—American FM Network news—Definitive local coverage—Special events programming—Play-by-play sportscasting—the FM Revolution has come to the Southern Finger Lakes. With WVBR-FM now serving central New Yorkers, radio will once again become an important source of entertainment and information in the Cornell community. When you have a chance, listen. WVBR-FM is at 93.5 Mc. on your FM dial. You'll be sold on the new WVBR!



Saving The Elms:

THE FIGHT

The American elm is at the end of its long reign as the stately shade tree that once graced parks and college campuses across the United States. Dutch elm disease has already killed countless American elms since its introduction to this country thirty-five years ago, and if left to spread, will entirely wipe out the American elm as a popular shade tree within fifteen years.

Cornell University has witnessed the gradual demise and removal of many of its favorite elms. The removals began last year with four elms on the Arts Quad and reached dramatic intensity this year with the amputation of the giant elm that had faithfully served Cornellians as a landmark for Willard Straight Hall.

Cornellians regard these tree removals as an inevitable tragedy and reconcile themselves to a campus soon barren of elms. Few of them realize that Cornell is using a control program that hopefully will curtail future elm loss.

Dutch elm disease is caused by a fungus and is characterized by disruption of normal water conduction within the tree causing it to wilt and die. The sticky spores of the fungus are carried by elm bark beetles who introduce them into healthy elms as they chew through the bark for nourishment. The spores are left in the water-conducting vessels where the fungus multiplies and spreads throughout the tree, its parasitic activities disrupting water flow and causing irreversible wilting, drying, and death of the leaves, twigs, branches, and finally the entire tree. Although the elm dies, the fungus remains alive and well, continuing to grow in the wood and inner bark of the dead tree.

This dead bark now becomes a highly attractive breeding ground for adult bark beetles. They tunnel between the infected wood and bark and there lay thousands of eggs which, when hatched, become contaminated with Dutch elm disease spores.

All elm bark is conducive to the breeding of these beetles, not just elm bark stricken with Dutch elm disease. Gnawing on both healthy and diseased elms, the bark beetle probably acquires some disease spores and carries them to the pure breeding ground where contaminated progeny emerge. The young bark beetles then go into the world and infect healthy elms, continuing the destructive cycle.

No cure is known for the elm once it has been infected with Dutch elm disease. But the disease can be controlled by suppressing local populations of the elm bark beetles who carry the casual fungus. Bark beetles are willing to travel about seven hundred feet to feed on elm bark, and so the goal is to eliminate possible sources of fungus-contaminated beetles within seven hundred feet of the trees to be protected. This is accomplished by a sanitation program to destroy breeding wood. Since all dead elm bark is inviting, even healthy elm cut for firewood is a potential source of trouble. The bark must be stripped off all dead elm wood and burned or buried immediately. This is why the bark was stripped from the stump of the elm standing in front of Willard Straight Hall.

Several other preventative measures are also used, but they are only supplementary and cannot replace a careful sanitation program. One such program involves the use of

AT CORNELL

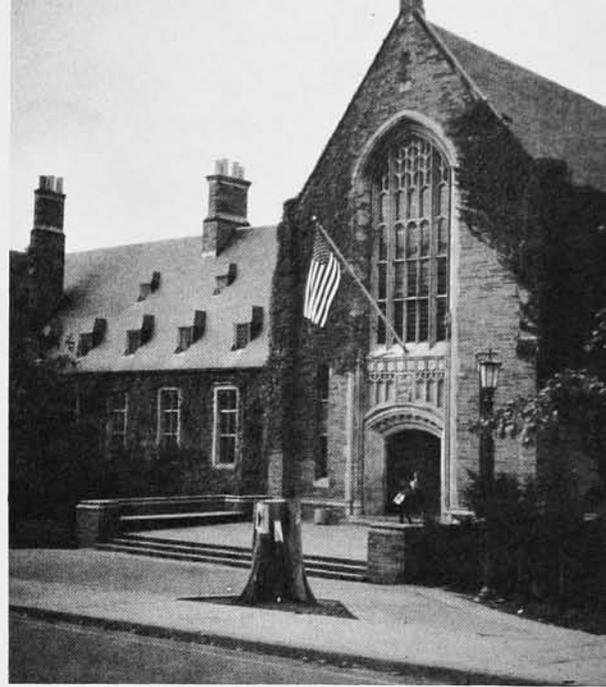
by CLAIRE GARRETT '70

a chemical soil fumigant which prevents transmission of the disease by root graft. Root grafts are natural grafts occurring between closely spaced trees. The fungus can then travel underground through a network of roots like an electric current through wire, infecting all the trees in the row or clump, while having been introduced by chewing beetles into only one of them. If the presence of the disease is detected early enough, the fumigant can be injected into a row of holes in the soil between the trees and will kill a narrow band of roots directly below. The fungus, not being able to jump across the dead root sections, will be contained within the infected tree and will not spread further via root graft.

If this scientific discovery had been made sooner, Cornell would have been able to save its row of Ostrander elms along East Avenue by Day Hall. These elms, given as a "permanent" gift, have all been infected by root graft already and must be removed. Of the four elms removed from the Arts Quad, two were infected by fungus-laden beetles, and they in turn infected the other two through the root graft process.

The tall stately elm, with its boughs hanging gracefully to shade the quadrangles and walks and enclose the avenues with arches, has become an identifying feature of the Cornell landscape. There is no doubt that the money spent on control of Dutch elm disease is well spent.

But for some communities, the decision to inaugurate a sanitation program is based purely on economic rather than aesthetic reasons. "No tree lives forever," points out Dr. Wayne Sinclair of the Plant Pathology Depart-



ment at Cornell, "and eventually even undiseased elms outlive their usefulness in terms of beauty and shade, and they must be replaced." A community must decide whether it will pay a series of small sums over the years for sanitation, or if it can afford to pay the entire cost when all of its elms are lost.

In concerned communities like Cornell, sanitation programs will rescue most of the remaining healthy elms from Dutch elm disease. In other areas where there is no control, the American elm will disappear from the cultivated landscape within fifteen years. This does not mean that the species will become extinct, for the American elm is a prolific seed-producer and each year thousands of elm saplings spring up in woodlands across the United States. Most of these young elms succumb to the disease, however, before reaching full height.

Work is now being done to develop strains of the American elm that are resistant to Dutch elm disease. Some species, such as the Siberian, Scotch, and Chinese elms are resistant to the disease but they do not develop the large size and vase-shaped form of the American elm. An elm must be bred that will combine the stately height and gracefulness of the American elm, with the tough resistance of the foreign elms.

Looking into the future we can see a Cornell landscape once again ruled by the elm, though of a different strain. But for the present time, we will continue to see the American elm as we know it, due to the effectiveness of the sanitation program. "If we can contain our losses," said Dr. Sinclair, "then we will have successfully ridden the storm."

The Lab For All Seasons

by PAUL KIRCHHOFFER '70

The Cornell Department of Floriculture and Ornamental Horticulture has recently initiated a new phase in research with the opening of eight new growth chambers in the Kenneth Post Laboratory. The purpose of these walk-in chambers is to provide a controlled atmosphere in which the effects of light, temperature, and humidity can be studied under repeatable conditions. This cannot be done in a normal greenhouse because it is impossible to accurately control the amount of light and the relative humidity. The new chambers give the researcher a precisely controlled environment in which to study the physiological processes of plants.

The chambers, located on Tower Road, are 9×12 feet with a walk-in height of 7 feet. They are constructed to allow plants to be grown outside and then brought in on carts. With such mobility the researcher can easily move his plants from one environment to another as the experiment demands.

Light in each of the units is provided by forty-eight 200 watt fluorescent bulbs. In addition, another forty-eight incandescent bulbs may be used to supplement the



Growing poinsettias in a control chamber.

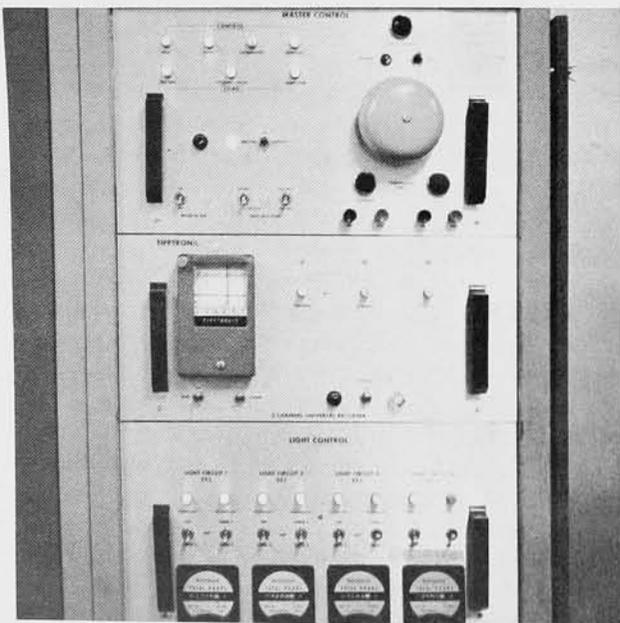
main system. The intensity of the light and the period of lighting may be varied to produce any length of day. This allows the researcher to experiment under any length of day regardless of the time of the year.

Temperature is controlled by circulating air through the side walls of the unit. Cooling is accomplished by expansion refrigerant coils, and heat is furnished by steam and electrical strips. Temperature inside the chamber can range from 45 to 95 degrees F. with an accuracy of plus or minus $\frac{3}{4}$ °F. Humidity is controlled through the use of steam and cooling coils.

The major environmental factors - light, temperature, and humidity are continuously monitored and each system registers graphically on a simple recorder. This not only serves as a permanent record but also helps to track down experiment malfunctions.

While most work done at the chambers is still of an exploratory nature, some productive research has already been accomplished. Miss Le-Hong Cheng, a Cornell graduate student in Floriculture, has experimented with the amount of light necessary to initiate flower bud development in carnations. Her results indicate that raising the intensity of light over a critical period will produce buds in a shorter length of time. Promising research is also being done with the critical light periods for mum plants. Both these experiments will have immediate and widespread application to the commercial flower industry.

The chambers are designed to provide year-round research on the problems that affect plant growth. When used in conjunction with the greenhouse facilities, the researcher has a constant supply of plants and a uniform set of growing conditions. Thus the Kenneth Post Growth Chambers permit a more critical study of the specific components of environment and plant growth vital to a greater understanding of the complexities of plant life.



Control monitor and panel.

COUNTRYMAN CAPSULE

DR. HOLLEY WINS 1968 NOBEL PRIZE

Cornell can add yet another name to the long list of distinguished awards received by members of its faculty.

Robert W. Holley has been awarded the 1968 Nobel Prize for physiology and medicine, with two other American professors. It was given for their work on the interpretation of the genetic code and its function in protein synthesis.

He will share the award with Professor Har Gobind Khorana of the University of Wisconsin and Professor Marshall W. Nirenberg of the National Heart Institute of Bethesda, Md.

Holley received the prize early in October for his part in determining the chemical structure of a nucleic acid, RNA, which converts the hereditary messages of genes into protein.

Dr. Holley is not new to recognition for his outstanding work. He was awarded a John Simon Guggenheim Memorial Fellowship in 1955. In 1965 he received the Distinguished Service Award from the United States Department of Agriculture for research service. Also in



Dr. Robert Holley

1965 he was one of two winners of the 20th Annual Albert Lasker Medical Research Award. In 1967 he won the U. S. Steel Foundation Award.

A native of Urbana, Illinois, Dr. Holley earned his Ph.D. at Cornell in 1947. He returned in 1948 when he joined the College of Agriculture staff, serving as assistant and associate professor of organic chemistry. In 1957 he was named a research scientist at the U. S. Plant, Soil and Nutrition Laboratory, where much of his RNA research was carried out. During his years with the federal laboratory he also served as a Cornell biochemistry instructor. He was named a full professor of biochemistry in 1964.

His discovery climaxed seven years of work seeking to determine the sequence of "letters" in one form of alanine transfer RNA. It is believed that his discovery will lead to a better understanding of the chemistry of life, especially in finding how chemicals are incorporated into the cell in protein form.

Hopefully this will aid in ascertaining the way many diseases disrupt the normal functioning of the cell. Thus scientists can presumably learn to correct the breakdowns in the systems causing diseases.

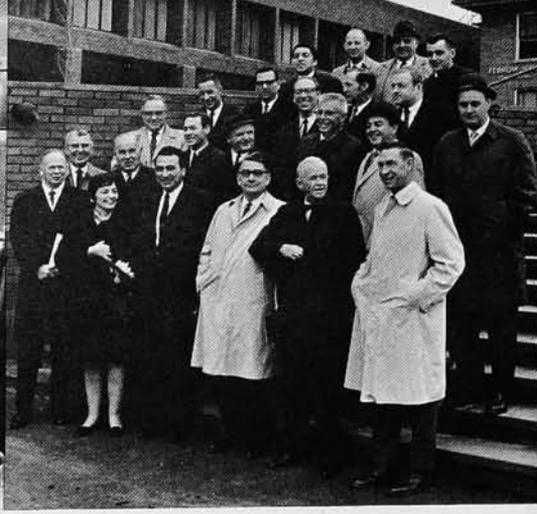
The College of Agriculture and the Cornell community congratulate Dr. Holley on his discovery and are proud to have been the setting for such an outstanding achievement.

PICTURE CREDITS

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Republican Assemblyman Robert F. Kelly of Brooklyn, and his Democratic colleague Gregory Pope of Lockport, listen to a discussion of the research that is being done in a growth chamber. Dr. Nyle C. Brady, director of research at the College of Agriculture and director of the Legislative Tour, explains the fine points.



The Legislators and members of the College of Agriculture Council pause on the steps of the new Emerson-Bradfield complex after inspecting the eleven-story facility during a two-day tour of the College of Agriculture, November 25 and 26.



Assemblyman James J. Barry (D) Syracuse and Victor Waryas (D) Poughkeepsie sample New York State dairy products. Senators, Assemblymen, their aids and College Council members spend two days inspecting the New York State College of Agriculture and its facilities.

The Dairy Records Computer Operation is being explained by Dr. Charles R. Henderson, Cornell, to Mrs. Constance E. Cook (R), Ithaca; Donald Hanks, Ag. College Council, Salem; Robert F. Kelly (R) Brooklyn; R. R.

Billings, Council, Buffalo; James H. Donovan (R) Chadwicks; Don J. Wickham, Commissioner of Agriculture and Markets; and Howard Gates, an aide to Sen. Thomas Laverne (R) Rochester.

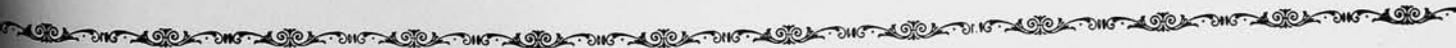
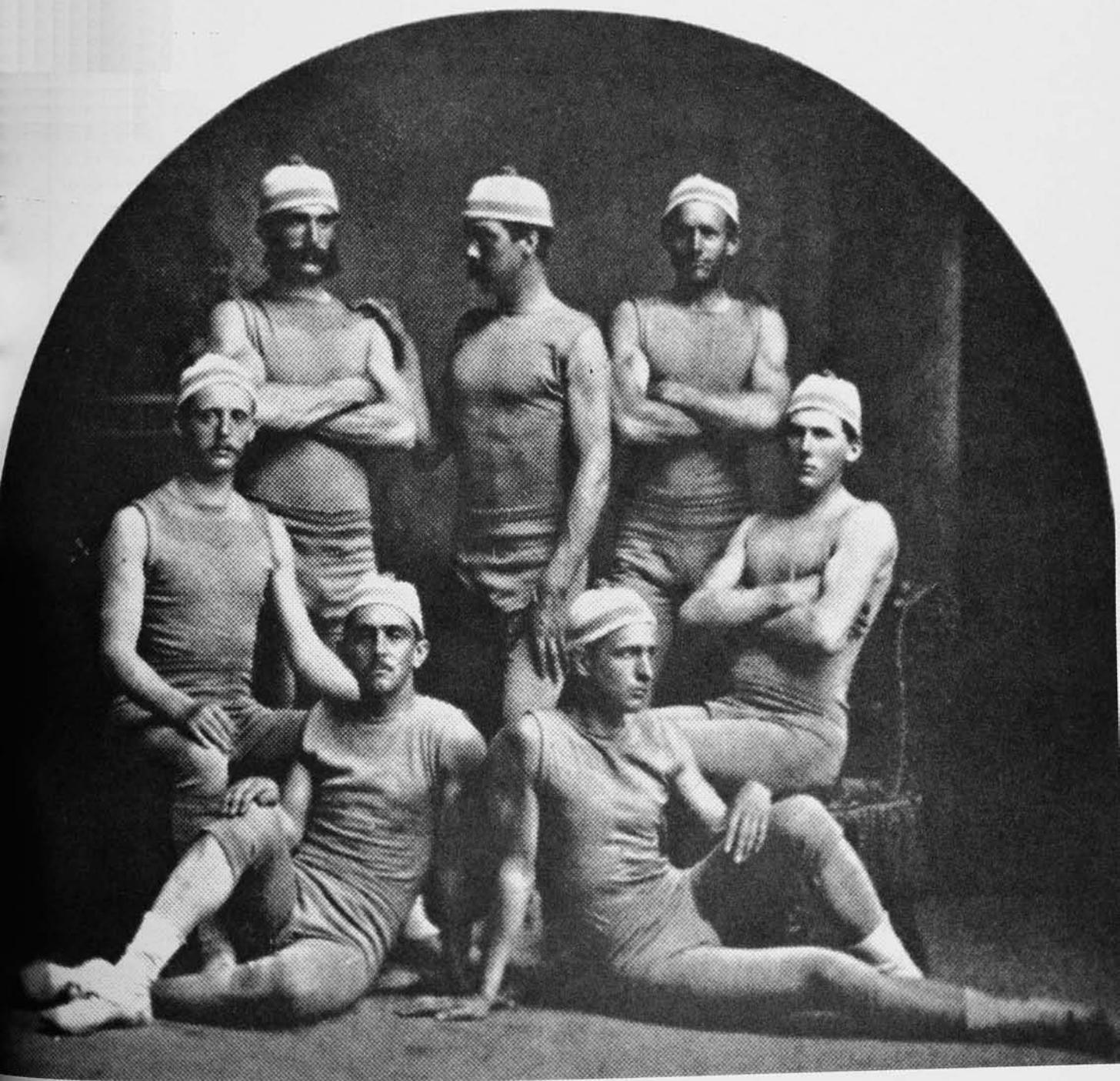


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1875 Crew

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CORNELL COUNTRYMAN JANUARY 1969/VOL. LXVI — NUMBER 4

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Miniature Society

George Junior Republic

by MARYA DALRYMPLE '70

"Nothing without labor, is the byword at George Junior Republic," stated Donald Fox, director of citizen affairs for this microcosmic community for youth, situated in the open countryside near Freeville, New York. Founded in 1895, by William R. George, more commonly referred to as "Daddy" George, the Republic is a private, non-profit organization designed to orient misguided youth to the demands of society.

In an effort to do this, George Junior Republic has initiated its own version of the U.S. monetary and judicial systems. Each member of the community works for regular U.S. currency; however, a dollar at George Junior is worth the equivalent of two American dollars. In addition, each citizen participates in realistic courts



George Jr. Republic court room

where misdemeanors are tried and punishments determined by fellow citizens, who are members of a Republic Bar Association.

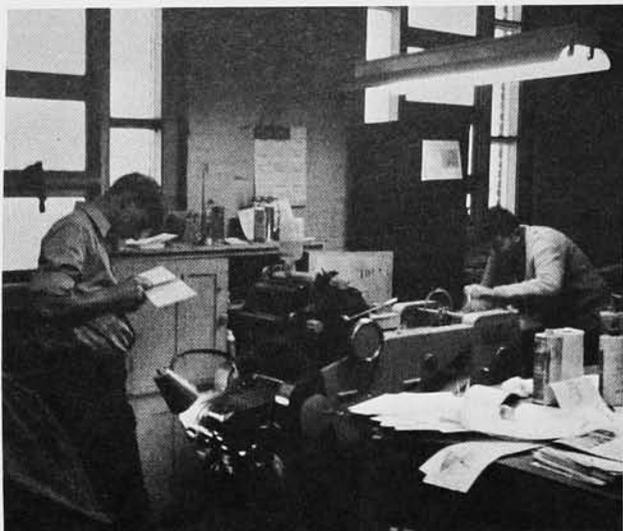
"Life at George Junior Republic is run according to schedule," continued Fox. "Each day the citizens (approximately 120 boys and 40 girls) awaken at 6 a.m., attend school for half a day, either in the morning or afternoon, then work for the half day that they are not in class. Evenings are spent in study or recreation, with bed at 9:30." This structured environment, the school feels, gives the youth needed security; a security which was often lacking in their former environments.

Despite stringent scheduling, the George Junior youth are allowed a choice in selecting jobs, as well as flexibility in electing courses for study. Each person maintains a job at which he works every day for 40 to 50 cents per hour in token currency. These jobs teach wise use of money, and give citizens the opportunity to purchase any extra luxuries they might desire. Such a system inevitably serves to emphasize the George Junior Republic creed that nothing is gained without work.

In addition to typical classroom studies, citizens at the Republic have the opportunity to learn useful, technical trades such as carpentry, electronics, upholstery and printing. There is also a colorful, modern art shop in which interested students may work creating clay sculpture, paintings, metal craft or intricate ceramic ware. Facilities for teaching are conducive to relaxed learning and because most classes are small, individual problems are easily discerned and dispelled. In addition to a faculty of 15, citizens are guided by skilled workmen, competent houseparents and other adults.



Art Shop

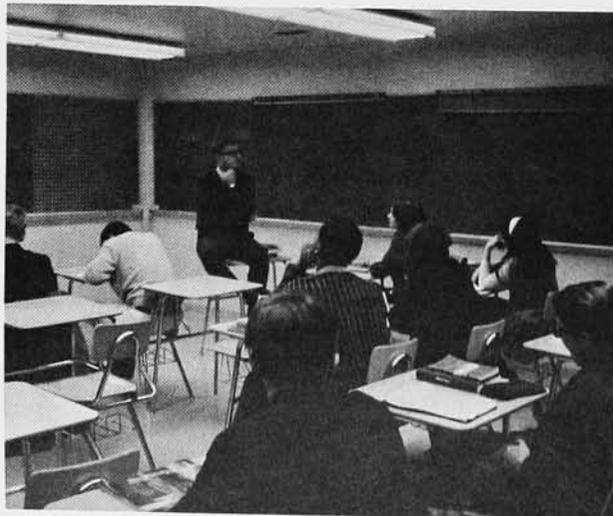


Trade Shop

In an effort to supplement the work of this staff and that of the administration at George Junior Republic, CIVITAS (Cornell-Ithaca Volunteers in Teaching and Service) is sending a number of Cornell students to the Republic. "CIVITAS brings a taste of the outside world to the kids at George Junior," stated Marshall Carey, chairman of the CIVITAS program.

CIVITAS initiated the project last year with students aiding staff in conducting athletics and a few courses. "This year we have made some changes as well as run into a number of problems," indicated Carey. One of the major differences from last year's program is the centralization of CIVITAS-conducted activities in the well equipped cultural center rather than holding sep-

Classroom



arate meetings in individual living units. By doing this, more youth are able to enjoy the CIVITAS programs.

"Another change which I am particularly encouraging," emphasized Carey, "is a closer communication between CIVITAS and the George Junior Republic administration to determine exactly what activities are needed and where we can utilize our talents to the fullest capacity." Increased consultation with the students themselves about what activities they would like to see instituted is also a new approach this year.

"As much as we would like to see a close kinship between our administration and the CIVITAS group, we are having difficulties," stated both Fox and Carey. Perhaps the major problem is the difficulty of scheduling CIVITAS programs into compatible times for the citizens. Another factor which often presents problems for the CIVITAS group, who have no organizational transportation, is finding rides to the Republic which is a thirty-minute drive from Cornell. Interrupted programs force lack of continuity and a consequent interest lag.

In spite of these setbacks, CIVITAS has continued to supplement programs at George Junior and to encourage the growth of new ideas. One of the most popular CIVITAS-conducted programs is a course in creative writing in which students are free to express inner tensions on paper. "The amazing intellect, worldliness, and sophistication of each of the students in my class can be seen in the stories and poems they create," stated Barbara Nelson, Arts '70, a CIVITAS member who heads a weekly writing seminar.

Another activity in which CIVITAS is attempting to create an interest is drama. Students who attend this class learn dramatic principles by participating in pantomime theater games. Other CIVITAS workers tutor citizens in French and the piano. Two Cornell guitarists teach guitar and lead a popular folk singing group who often entertain visitors with their repertoire.

"We are hoping to create wide interest in a debate team, which will be directed by one of Cornell's finest debaters, and which we hope will eventually be experienced enough to challenge other schools," Carey stated.

At the present time there are approximately 22 Cornellians interested in the George Junior Republic program. Only 15 of these people are being utilized. But CIVITAS hopes that, as the year progresses, the Republic will express a desire to use the skills of more Cornell students.

George Junior Republic represents a noble attempt to prepare human beings to accept their roles in society. For a number of dedicated Cornell students it is an opportunity for sharing talents and thoughts with receptive youth. The Cornell-George Junior Republic program has only begun to discover its potential; the challenges to be found in such a project can be unlimited.

BLACK PRIDE

— by MICHAEL BARCLAY '69 —

Say it loud . . . I'm Black and I'm proud
Say it loud . . . I'm Black and I'm proud
James Brown, singer.

That is Black Pride. The Black students that you see on this campus who wear their native dashiki and their natural hair styles with their heads held high and their shoulders squared are a part of that same Black Pride.

Many people have questions about Black Pride in the back of their minds; questions which range from critical disapproval to hearty encouragement. You probably already have your own answers. I'll give you mine.

What needs does Black Pride satisfy? To me and to most of my people, Black Pride satisfies two tightly interwoven, but none the less definable needs; one physical, the other psychological.

The first need that Black Pride satisfies is physical. My people must take pride in their physical appearance. Why? Because America is a land where beauty is measured against the rule of small, angular features, straight hair, and light skin. Whites are called beautiful when they most nearly approximate these standards. Thick lips, kinky hair, and dark skins scream inferiority with the same lusty voice as a Southern lynch mob. Blacks have tried to reach these standards, but the straightening combs and the lightening creams have taken their psychological toll. To counter this psychological handi-

cap, to remove this wearisome cloak of inferiority, we Black Americans have come to realize that we are not the inferior, ugly people that these racist beauty standards imply. We have found a painfully tender loveliness in the soft crowning glory of our women's Naturals. We have once again seen what we had been blinded to for so long, that we are truly physically Beautiful People.

The second need that Black Pride satisfies is psychological. After three hundred years of psychological slaughter started by America's leaders, Blacks need their psyches salvaged. When the Founding Fathers decided to link this country's economic growth to slavery by color, they also saw that they must justify this act to the world and to themselves. Thus, the law and the lawless, the writers and the religions waged an intense battle to convince the whole world that the Black man *was* an inferior species. It is from their propaganda that the mythical "Negro" was born; a grinning, foot-shuffling half-wit, content in his servitude. The latter day "Amos and Andy" and Stepin Fetchit, extensions of this monstrous hoax, were displayed before the Black population as models by which to pattern their lives. Black Pride firmly rejects this stereotype created in an atmosphere



of racism. An educated Black man, proud of his blackness, need not feel inferior when stung by the illiterate bigot's ultimate weapon, the word *Nigger*.

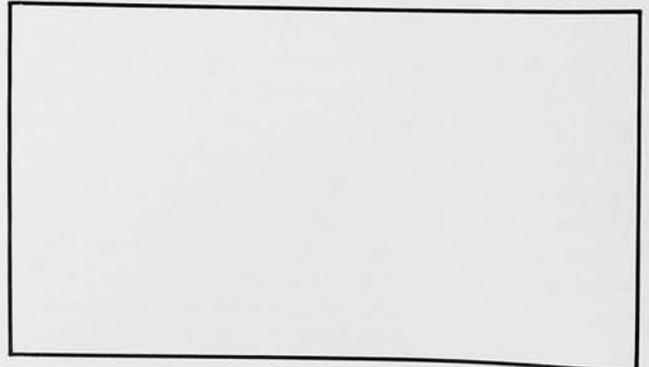
Furthermore, three hundred years of this brainwashing, where the white man is the Omnipotent Mind, and the Black man the Menial Body, has left the Black male without his manhood.

Whether as slave holder or corporation head, the Omnipotent Mind holds tyrannical power over the Menial Body; a power that, in the modern sense, says how much money will flow into how many Black pockets. And all tyrants hate to have their positions challenged. The Omnipotent Mind sought and seeks to protect its position by alluding to the Menial Bodies' supposed mental inferiority. It is not odd that, today, Black athletes abound and excel in almost every American sport. In fact, the oddity occurs when a Black man is *not* an excellent athlete, singer, or dancer. The Omnipotent Mind has allowed this because the Menial Body is in his "natural environment" where brute force is the ultimate law. However, it is when the Menial Body tries to move into the sacred sphere of the Omnipotent Mind, the decision-making role, that the chasms are the widest and the doors bolted the tightest.

This Mind-Body concept has influenced the thinking of Black people too. Black women, viewing their men as this Menial Body, have lost all respect for them. For what is the head of a family who is constantly forced to be humble and who can not protect and provide for his wife and children?

Black Pride accepts the fact that the strong, broad shoulders that helped to build this country were Black. But Black Pride also stimulates the Black male ego that was legislated, lynched, written, and preached into dormancy. With this strong ego, Black men possess all the characteristics of man, a strong arm and a strong ego.

Black Pride, a concept advanced by the late Malcolm X and embraced by millions of Blacks, serves two tightly knit purposes: one physical and the other psychological. But more than this, Black Pride has kindled that indefinable *something* inside of every Black man to fill a void that is filled in every Italian with his Sistine Chapel, every Scot with his kilts, and every Jew with his yarmulka. Yes, I'm Black . . . And I'm proud.



Turn On Tune In Take Down

by JANICE JOHNSON '72

A Cornell co-ed shuts off her alarm, turns on the television set, grabs her pen and notebook, and climbs back in bed to listen to her 8 a.m. biology lecture. Sound absurd? Within perhaps the next decade, widespread instruction by television will become a major influence in the education of the American population.

The Educational Television Center (ETV) at the College of Home Economics is likewise playing an important role in such fields as child development, housing and design, and food and nutrition. Presently it is correlated with resident instruction courses and used to generally improve the quality of education in the College.

The branches of this Center are the closed circuit system used specifically by the College, as well as for programming for wider audiences. ETV supplements and enriches the courses previously mentioned with taped special lectures, demonstrations, lab experiments, and panel discussions. Children playing in a nursery can be taped and observed by all students taking child development courses. Television is used in home economics education to evaluate micro-teaching experiences. The ETV center is presently developing a series of five programs dealing with nutrition for teenagers for food and nutrition studies.

The latter and major branch is the distribution of its programs through the Cooperative Extension programs and other means. In the future, the Home Ec College could exchange courses with other institutions throughout the state by sharing ETV films. No doubt there will also be a video-tape library set up to offer video-tape copies to classes and small groups.

These two factors necessitate that all facilities at ETV be strictly professional. Located on the basement floor

of the North Wing are the studio-complex and offices for personnel. Here is housed half a million dollars worth of equipment, including a very sophisticated device which allows the tape to be edited when necessary to omit the redundancy of the classroom. With care, a tape can be used two hundred times or more. The system also has the advantage of three different closed circuit channels; therefore, it is only a problem of scheduling if different teachers should all want the film at the same time.

The ETV center is equipped with a mobile TV system which can be used in any remote (non-studio) location as well as in the studio. This allows flexibility in the master studio-complex, and every location in the North Wing becomes a potential studio.

The use of television in education has proven advantageous. Teachers do not have to bother with slide or film projectors. They just switch on the monitor! When there is an overflow of students or there is a lot of material in a course that does not change appreciably over a considerable period of time, the teacher won't have to repeat it. The ETV center does it once on film with exciting visual aids, and the teacher is free to do other more important things.

Professor Averson, head director of ETV, envisions the use of TV throughout the University by revising and supplementing existing courses or even introducing new ones which television would make possible. Although the example in the first sentence appears ridiculous now, the day will come when students will have the chance to study for finals by watching re-runs of important lectures from their courses. The best justification for educational television, however, is its continual improvement in education as day after day it opens new horizons.



1895 faculty baseball team

Ezra at the Bat

by WILLIAM OVERSTREET '71

There was a time when the hockey stick was not the sceptre of state in Ithaca and the goalie was not Ulysses incarnate for Cornell students. There was no Ivy League, no Crescent, no Lynah Rink back then when athletics were struggling to gain a place far above Cayuga's waters, which had never been parted by an eight-man crew stroking to the bellowing of a coxswain.

Intercollegiate athletics has come a long way since 1868 and many are the alumni who will argue that Cornell has played a noble part in its development. There are also those who will profess with equal fervor that athletics has also had its effects on Cornell. The former group would glow in red-faced pride remembering the heroics of the playing field; the latter would grow red around the collar recalling the shenanigans of the locker room. In those early days of Cornell's first decades there were numerous examples of both.

Perhaps the first sport to be played this side of Cascadilla Gorge was baseball. Those were the days when an out was made by hitting the runner with the ball and a side was retired only after each member of the opposing team had been beamed. Most games were played right on the campus, which also served as the Cornell family cow pasture. Before the contests could begin the

animals had to be driven off the diamond.

The first varsity game was played against Cascadilla Club in May 1869, with Cornell posting a 42-26 victory. The initial intercollegiate game was played at Hobart with the home team winning 43-16. Cornell registered a protest, however, since most of the team objected to playing baseball on a field where third base was ten feet above the first base level and the shortstop had to compete with a tree for pop flies.

There weren't many pitchers' duels in those days, especially on the Cornell grazing grounds. In fact, a reporter for the Ithaca "Journal" one day in 1878 reported that the main feature of one game occurred in the seventh inning when the captain of the visiting team slid into "what he thought was third base."

But baseball was not the only sport. Crew was the big event with two boating clubs being organized in 1871. The first regatta held the following year highlighted the efforts of Robert H. Treman, who, upon breaking his oar, jumped into the lake to keep from hindering his boat. Unfortunately his gallant leap was in vain; his boat lost.

Cornell appeared in the Saratoga regatta in 1873 and 1874, and in 1875 won the three-mile race in 16:53.25. Among those losing were Harvard and Columbia. Legend

has it that when President Andrew D. White received the telegram informing him of the victory, he rushed to McGraw Hall, broke the lock on the chimes levers and rang them himself.

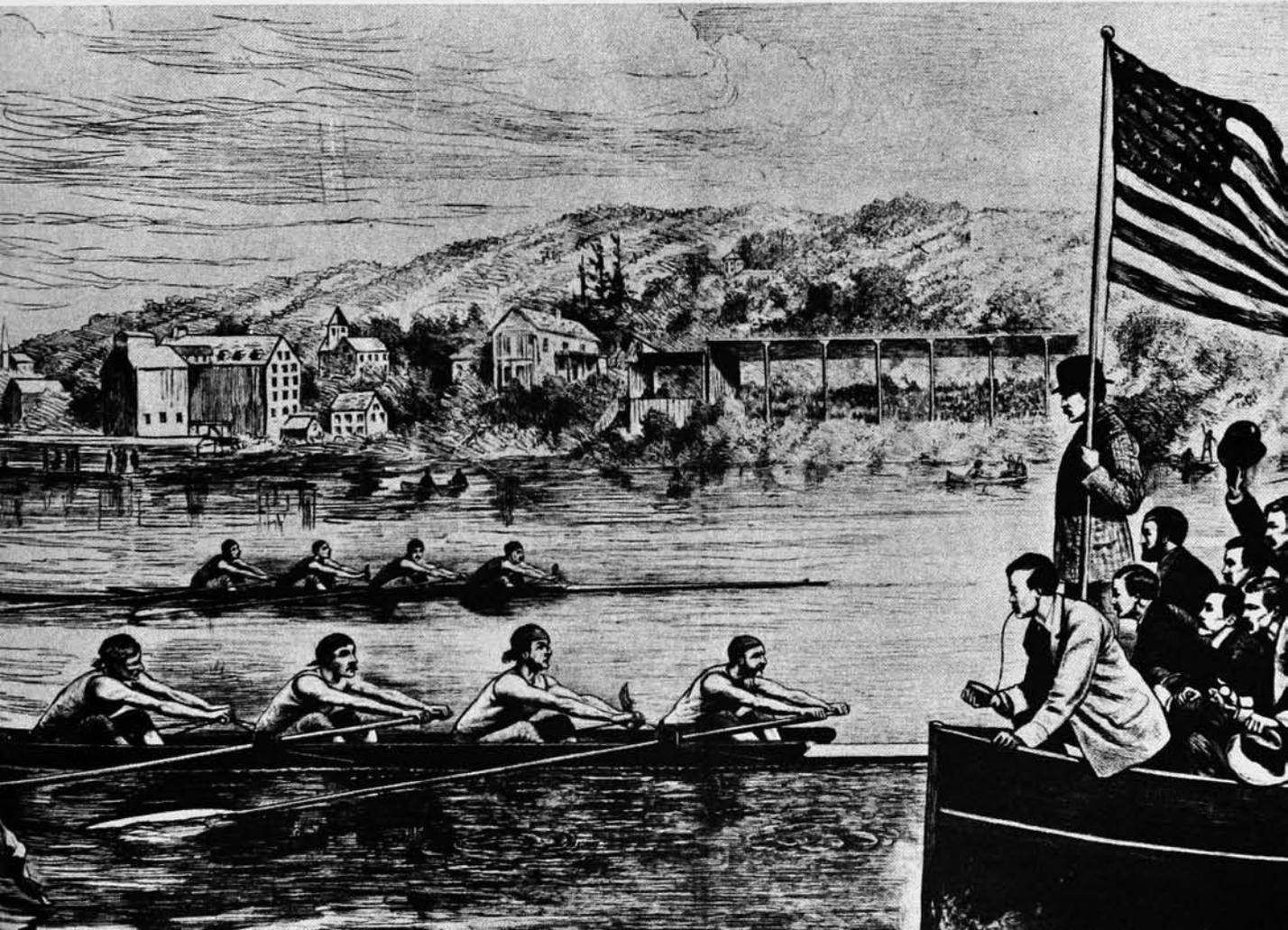
The heyday of crew came under the reign of Charles E. Courtney of Union Springs, a champion professional at the sport. The first eight-oar team was organized in 1889 and Cornell lost but three races until 1898; one to Columbia in 1895, one to Trinity Hall in the Henley Regatta that same year, and one to Penn in 1898.

The most amazing achievement came in 1897. Courtney, considered by many second only to Ivan the Terrible when it came to despotism, was a fanatic for training. Thus, when he found that five members of the varsity crew had consumed large portions of strawberry shortcake one day, the hatchet fell for the hungry unfortunates. With the Poughkeepsie Regatta looming, Courtney set about finding five replacements. His choices were good ones. Cornell won the meet, thus enshrining the "Strawberry Shortcake Crew" forever in the annals of rowing history.

And of course there was football. The first challenge to Cornell was issued in 1873 by Michigan who proposed a game to be played at Cleveland. Andrew D. White, however, was not a fan of the game and refused permission stating, "I will not permit 30 men to travel 400 miles to agitate a bag of wind."

From there things went downhill. In 1875 and 1876 Harvard and Yale organized the game into a pseudo-modern form, but Cornell insisted on playing by its own rules. The "rules" resulted in a fiasco composed of the worst of soccer and rugby that at best amounted to a free-for-all. As could be expected, no one else would play, so Cornell played itself until 1886.

The initial intercollegiate football game was a scrimmage against Union in 1887 in preparation for a Thanksgiving Day contest against Lehigh at Elmira. Lehigh won 38-10. Meanwhile the other schools destined to form the Ivy League were perfecting the sport. Penn and Princeton started their rivalry in 1876, and in 1888 Yale outscored its opponents 694-0. Cornell's first contest with Penn came in 1893 and resulted in a 50-0 loss.



In 1897 Glenn "Pop" Warner, '94, was enlisted as coach. The antics that resulted from his tutelage were more entertaining than the scores. His most infamous creation, first used against Penn State that year, was the hidden-ball play. The maneuver consisted of the quarterback's shoving the pigskin up the back of a player sporting an elastic-bound jersey. Another player would follow him into the end zone, uncover the ball, and touch it down.

The outlook started improving in 1913, the year Cornell defeated Penn for the second time in 20 years, 21-0. According to Morris Bishop in *A History of Cornell*, the resulting celebration was comparable to the Bolshevik Revolution, in both Ithaca and Philadelphia. In 1914-15 no touchdown was scored through the Cornell line in 18 games and Cornell was named national champion.

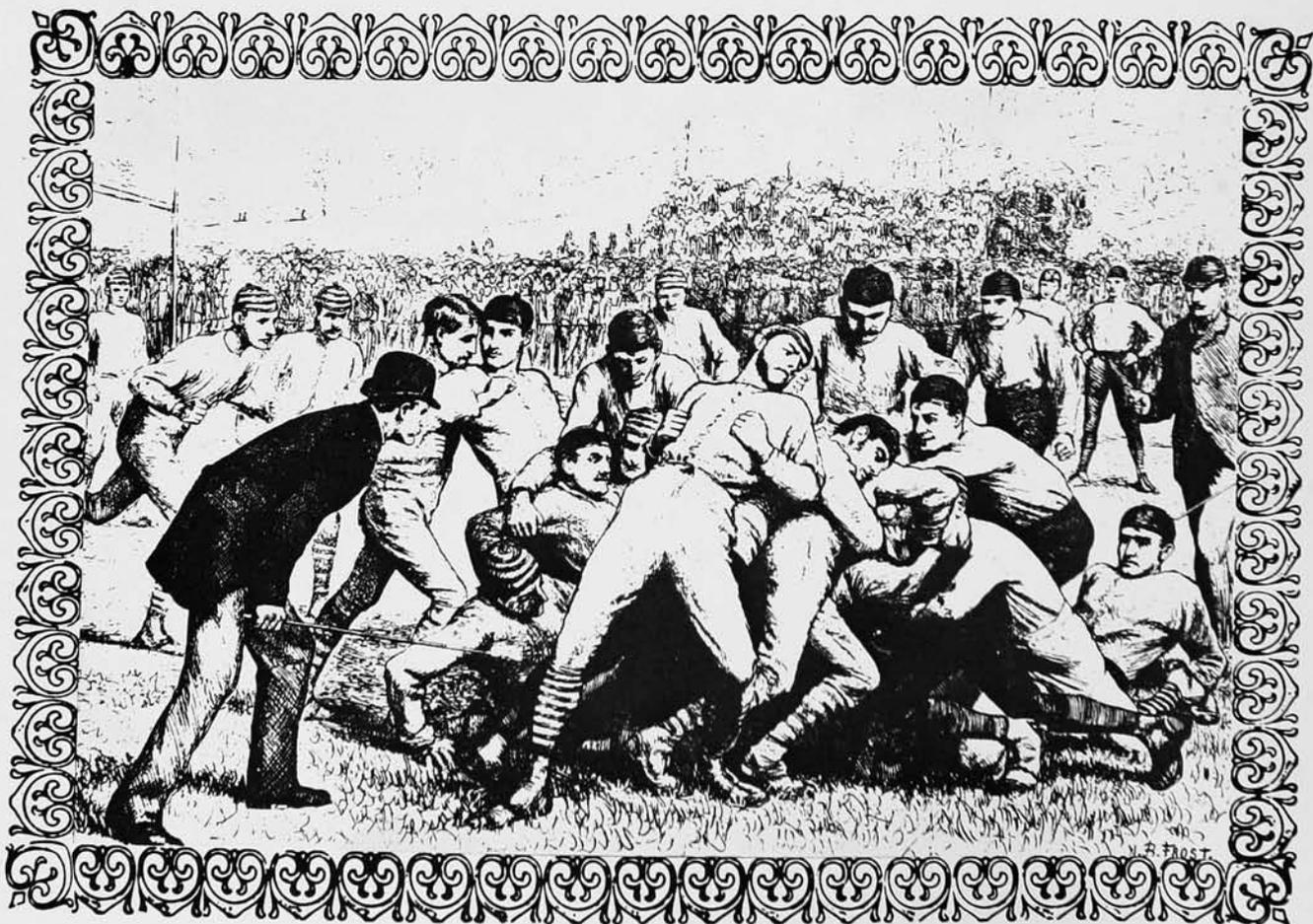
In the early 1920's Cornell won a string of 26 straight games, one of the highlights being a 41-0 victory over Penn that featured five touchdowns by Eddie Kaw. Bishop describes Kaw as "a mudhorse, with an uncouth style, striding farther with one foot than the other. He

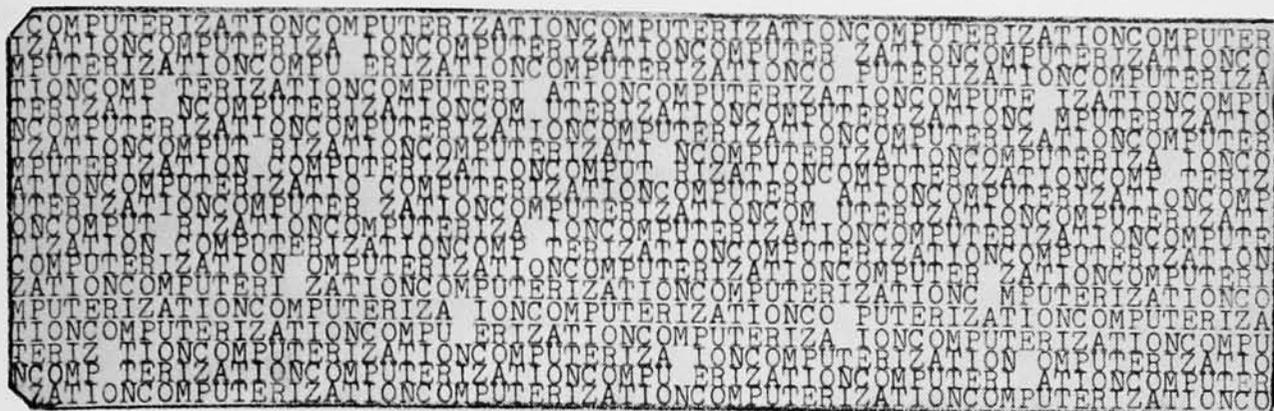
used the ball for interference, smiting opposing tacklers with it."

Engineering professor Johnny Parson is credited with starting hockey at Cornell by setting up the first rink on Beebe Lake in 1896. The 1907-1908 teams went undefeated. In 1911 Cornell was named national hockey champion for the first time. Most of the games, however, were played on city rinks because Beebe Lake had a habit of melting before contests.

And so the foundations were set, not only in baseball, crew, football, and hockey, but in many others as well. For years the track team was one of the best in the nation and more than once included Olympic medal holders and world record setters. Basketball, first organized in 1898, resulted in the formation of the Intercollegiate League, the forerunner of the Ivy League, with Harvard, Princeton, and Yale in 1901.

The days of Charles Courtney, "Pop" Warner, and Johnny Parson are gone. But the records and heroics are still being recorded; the stories, the legends, the anecdotes linger on. There will always be a place for them.





Computerized Registration

by BARBARA GRAY '72

Students registering at Cornell this fall received pre-printed and very official-looking schedule cards. This was perhaps the only clue that a system of computerized registration had been put into effect for the first time throughout the University.

The advantages gained by further involving computers in our lives were not many, but computer-haters cannot yet rejoice. Since this was an experimental year, many things still have to be worked out before the advantages of this system can be realized to the full extent.

The major benefit of computerized registration was that each professor received a list of all the students enrolled in his course from each school or college prior to the opening of classes. This was not available previously.

Of course computerized registration was meant to bring about other benefits as well. We have often heard that computers save time, money and labor in the long run. But problems in operation have to be smoothed out first. One of these problems is the very strict schedule set up by the program, which has been difficult to keep up with. First a college roster has to be prepared, listing all the courses and the time and days on which they meet. This must be done before pre-registration so a student can be scheduled without conflicts.

Each department in the University has to order course and section computer cards for each course taught. Fifteen master name cards have to be programmed for each student. Names then have to be arranged according to course by taking one name card from each student enrolled in a course and programming it with the course card to produce the class list. This rigid schedule involves checking and rechecking. Eventually computers will save time with better ways of checking material

before and after programming and with improved procedure.

There is also a wide range of improvements in the service of computers; for example, although a student receives a schedule printed by the computer, including courses, sections, and times, he must scan through a course roster to find where he must go for each class. It is hoped that in the future computers will be used to print this material onto the schedule cards.

One improvement being worked on now by the University is the centralization of computer data from more than 20 different departments. There are no overlapping files. To improve the situation there should be a storehouse of information for each student. The limitation on this is that each department has different methods of storing computer information. A new position in the registrar's office, a Director of Student Data Systems, may be established to help centralize all the records and sources of information about a student.

The ultimate advantage of the system and the improvements needed must be evaluated over a longer period of time. Mistakes in the program will become fewer as the system becomes more familiar and instructions for processing are made clearer. It is hoped that the number of errors in registration eventually will be reduced by computers.

Therefore, what we should look at now are the possibilities of this system of registration. All the problems and rough edges must be eliminated before a critical view can be taken of the program. Like many innovations, the benefits may not be felt at the present, but will be worth the struggle in the future.

Fight for Biafran Survival

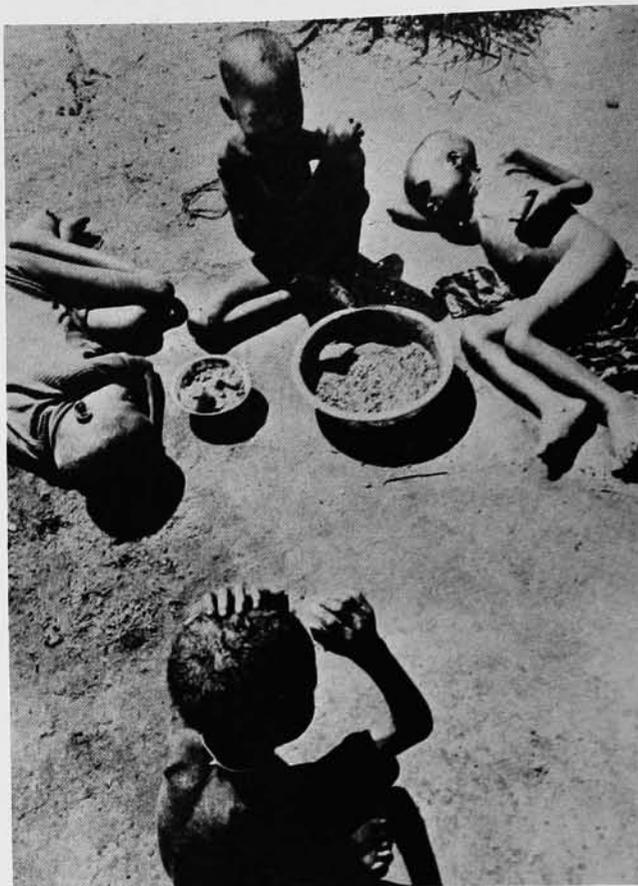
by **CLAIRE GARRETT '70**

At some point human suffering becomes too unbearable to witness passively and uninvolved strangers come together to end it. That was the case at Cornell this fall with the formation of the Biafran Relief Committee to aid the victims of the Nigerian-Biafran war.

It is hard to comprehend the immensity of human suffering and destruction caused by this war that appears to be increasingly more genocidal than political. Biafra's secession from Nigeria was the ostensible reason for Nigeria's "swift and surgical operation" of attack, but since then the bloody military acts of torture have instilled the Ibo people of Biafra with such an intense fear that they will never submit willingly to reunification. Meanwhile, Nigerian Colonel Adekunle has said, "I want to prevent even one Ibo having even one piece to eat before their capitulation."

Biafrans have chosen the only alternative to surrender and are fleeing before the Nigerian military terrorists farther into the unoccupied central portions of Biafra. They are cut off from supplies, and they face almost certain death from starvation and disease.

The civilian death rate in Biafra was estimated to be 10,000 per day during October, 1968. By the end of December it had risen to 25,000 per day. The Christian Ibos, once the most educated people of pre-war Nigeria, face extinction unless the war is ended or supplies continue to be sent in.



Organizations such as the Catholic Caritas, World Council of Churches, Red Cross and UNICEF send supplies. Cornell's Biafran Relief Committee sends its contributions through Caritas in particular, unless donations are specifically directed to the other organizations. According to Treasurer Daniel Ezeokoli, Caritas is most effective in delivering relief directly to Biafra by flying planes at great risk over the Nigerian blockade. The other organizations reportedly send supplies to be allocated by the legal government, Nigeria, with the result that much of it never reaches the Ibos.

Cornell's Biafran Relief Committee had a rather diffuse birth, being conceived simultaneously by several groups and individuals appalled at the situation. The Biafran Students Association had been in existence for some time and had sponsored several lectures during the summer session but was unknown to the bulk of returning militant students.

When the issue was brought up at an SDS meeting in September by Jay Johnson '72, who had worked during the summer for the New York City Committee to Keep Biafra Alive, concerned Cornellians were brought together for the first time. At the October 1 Biafra symposium, sponsored by the Ithaca Jaycees, these students met the Biafran students for the first time and created a vibrant and dedicated committee.

Fund-raising activities were started. A table with

literature was maintained in the Straight lobby and movies were sponsored. But the most dramatic and effective project to date has been the two-day fast and vigil on the Arts Quad. Four-thirty Wednesday, October 23 saw a large and somber crowd gathered for the opening speeches of the fast. Father Connor, Don Lee, black poet-in-residence, and His Excellency Mr. Timothee Ahoua, the Ambassador to the U.S. from the Ivory Coast (one of the countries recognizing Biafra) spoke eloquently before the black-armed participants.

Ithaca's rainy skies drove the Thursday ceremonies into the Straight's Memorial Room, where actor Cliff Robertson, who has travelled across the U.S. to solicit funds for Biafran relief, spoke to the crowd. The movie *Biafran Tragedy* was shown continuously until the breaking of the fast ceremony.

Breaking the bread, that was contributed by Housing and Dining in exchange for meal tickets not used during the fast, Father Daniel Berrigan said, "Let us heal one another." "We should be sorrowful, indignant and awakened on a day like this," he continued, and discussed crimes committed against children all over the world. From the standing-room-only crowd, many people emerged who were willing and eager to pledge time and money to help.

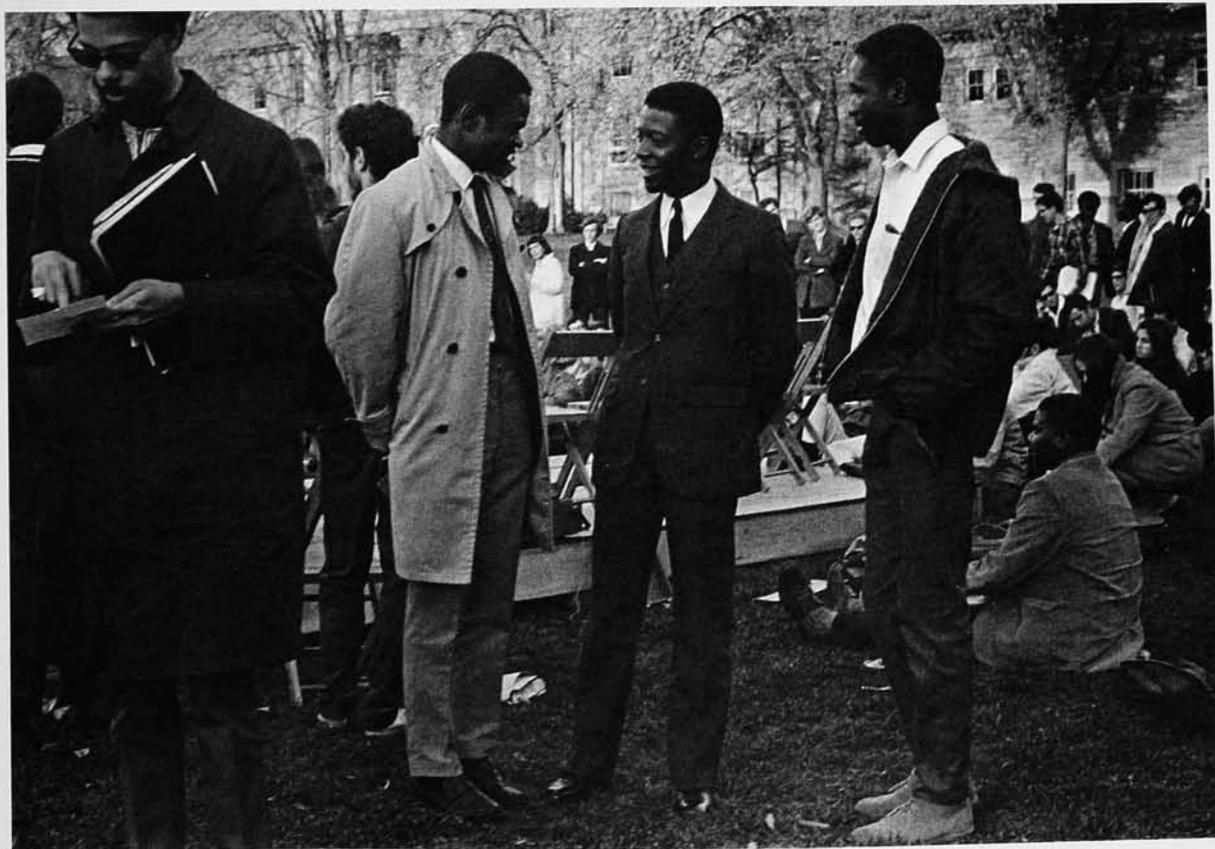
Nearly \$4,000 has been raised as of early December

from students, faculty and Ithaca residents. Although this seems like a substantial sum, it does not, in reality, go very far. Due to the high cost of transportation and the impossibility of getting all supplies past the Nigerian blockade, the cost of maintaining one child for one day is approximately three dollars. Relief can only attempt to lessen the suffering.

According to Ezeokoli, the ultimate solution must therefore be to urge the political powers involved to bring about an end to the Biafran war. Because of Nigeria's richness in oil, many larger nations have more than a mere humanitarian interest in a rapid termination of the conflict. The Biafran Relief Committee is at present mobilizing a letter and telegram campaign directed towards Congressmen, the President and representatives to the U.N. to press for an immediate end to the bloodshed.

Letters are also being written to UPI to ask for greater coverage of the situation. The "HELP" letter distributed to students details what needs to be done. At the bottom of this letter is the statement, "Without action we have only despair."

The groundwork for Biafran relief has been laid. Cornell's Relief Committee is already organized to inform the students and ask for help. The masses of students must now respond.



Fast on Arts Quad: left—Don Lee, poet-in-residence; second from right—Mr. Timothee Ahoua, Ivory Coast Ambassador to the United States.

COW POWER

by SUE SMITH '70

"We were fed up with just sitting around and complaining. We just figured it was time someone took some serious action about this thing, so we grabbed some magic markers and made a few posters. Frankly, we were a bit pessimistic about the response we'd get but our efforts certainly proved worthwhile."

This is how Joan Schmuckler '70, founder and newly-elected chairman of the Committee for Agriculture School Reforms, described her part in getting the action group on its feet. The few posters she and her roommate, Bev Greenberg '70, hung in various spots about the University attracted some 30 students interested in changing the Ag school. At the initial committee meeting it rapidly became evident that students in the College of Agriculture are discontent with many aspects of their education and are willing to work for improvement.

Since early November, when the Committee for Agriculture School Reforms first met, it has gained momentum not only in the number of active members but also in the enthusiastic response the faculty and administration have offered towards proposals for change.

There are four general areas which are presently under examination by the committee. The first of these includes a general review of the purpose and goals of the Ag school, somewhat similar to the recent study done in the College of Home Economics. The idea for such evaluation came from complaints that the College of Agriculture is not really keeping up with the times. It is felt that many of the programs are concerned with problems that were important in the past but are of little significance now that our society has essentially been transformed from a rural to an urban-industrial one.

Distribution of credit requirements is another bone of contention with many of the students. They feel that it is unfair to have major requirements come from the twenty Arts School electives. People majoring in such areas as communication arts and rural sociology are especially distressed that they are required to have 24

hours of science credits, while there is general dissatisfaction with the current situation where all 55 state school electives must be fulfilled in the Ag school. An alternate proposal consists of 40 Ag electives and 15 from other state divisions.

Many students complain about the practice requirement which involves receiving credit for summer work related to one's major. Although some students are able to complete this requirement in one summer, others must work at least two summers before they receive full credit for their jobs.

The Committee for Agriculture School Reforms feels that since many jobs related to majors are low paying, a requirement in excess of one summer can pose an extreme financial burden on students faced with rising costs of tuition, room and board. In addition, locating summer jobs in one's major area can be a difficult task, therefore the Committee feels the College of Agriculture should have greater placement facilities for this purpose.

Finally, the Committee for Agriculture Reform is pressing for an entire re-evaluation of the level of education in the College of Agriculture with special emphasis given to credit value allotted to many courses. Such an re-evaluation, it is hoped, will eliminate the problem of having a course sound great in the catalogue but be totally unexciting and unstimulating in the classroom. Two credit courses, it was pointed out, often entail as much work as three and four credit courses and cause a student to carry an excessively heavy academic load, greatly limiting the amount of time spent per course. Having certain courses four credits would allow a student to approach a smaller load of courses in greater depth and hopefully derive more from his education.

What does all this mean? Probably that we're bound to see some very basic changes come about in the College of Agriculture. That's really not surprising though . . . there's been student power, flower power, black power . . . why not a little cow power?

ALUMNI

Dale Ritchey, who received his M.S. in agronomy from Cornell in 1967, spent the last year working in Algeria with the American Friends Service Committee community development team. His central project was introducing soybeans.

"Animal protein is pretty scarce in that area," he explained, "soybeans have two times as much protein as chick-peas, a common crop. Since the people were already used to eating chick-peas, they accepted soybeans as a food without any problem."

Ritchey was aided by an Algerian who had formerly worked with the AFSC team. On some farms, the two men planted their own demonstration plots. On others, they provided the seed and gave technical advice.

School gardens were the focus of Ritchey's second project. He visited isolated villages to advise school directors who had planted gardens with tools and seeds given by the AFSC. School children helped with the work and the food was used in school lunches. "Many families also have small gardens, but there is a lot of potential for increasing the yield," Ritchey said. In addition, he continued work begun on introducing a new breed of chickens.

The majority of the fourteen Quaker workers is based in Skikda, a small city on the Mediterranean, but Ritchey had opportunities to visit other parts of the country. "There is a great variety in the countryside. As you go south, you come to the mountains, then the desert. The further south you go, the less influence the French have had, and the friendlier the people are," Ritchey stated.

The AFSC began its work with Algerians in 1959 when it sent teams to both Morocco and Tunisia to en-



Dale Ritchey, M.S. 1967

courage self-help programs among the Algerian refugees who had fled the violence of the Algerian war. At the termination of the hostilities the AFSC moved into Algeria with the returning refugees and established programs of community development in both the West and the East.

Among the activities developed within Algerian towns and villages by local people under the encouragement of the Quaker workers are maternal and child health centers, nursery schools, sewing groups, and self-help projects.

PICTURE CREDITS

Cover—Cornell in Pictures; *pages 3, 4*—Ed Hartman; *page 6*—Jack Sherman; *page 8*—Cornell in Pictures; *page 9*—After the Civil War; *page 10*—B. Frost; *page 11*—Gerard Klijn; *page 12*—John Dejournett; *page 15*—American Friends Service Committee.

Reply to

Miss Bitterman:

I enjoyed your story about the discrimination against co-eds in the Countryman.

The Glee Club did not sing this song (houseparty) from, I think, Chi Psi, which was opposed to co-eds: We'll have girls from

Poughkeepsie, Girls
from New York,
Girls from Chicago where
they change the pigs
to pork,

Squaws from Alaska, Girls
from Peru,

But we'll kill the guy who
brings a Cornell co-ed
from the U.

This is not very flattering to the English Dept.

Actually, in my time, the pretty co-eds at Cornell were so popular it was not possible for the average man student to get a date less than three weeks in advance. At the dances you only went a few steps with the good looking ones before someone cut in. I suppose the unattractive co-eds had a tough time but the lovely ones were very popular even with the Kappa Alphas who bragged that no co-ed had ever crossed their door-sill. In fact, the prettiest girl in my class, Betty Wyckoff, married George Pfann, Cornell's All-American quarterback.

Present day men students must be rude. You say the girl carries her own suitcase while holding her date's arm. Forty years ago we always carried the girl's suitcase.

Irving Taylor '27
Mountain View, New York



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December 19, 1968

Mr. Mike Hogan '69
c/o Cornell Countryman
Roberts Hall
Ithaca, New York

Dear Mr. Hogan:

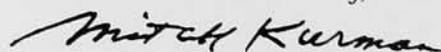
I found your article re: the atomic energy plant now being built on Cayuga Lake extremely interesting. For one thing I'm an old aquatic biologist simply interested in the ecology. I've seen too many beautiful streams and lakes simply go to pot in the mad money race we think of as progress. It is interesting that "N.Y.S.E.&G." should be operating with all possible speed, perhaps before the public gathers its wits to take action to stop or delay it! Certainly a "mere" 2 million dollars tossed aside on the "calculated risk" that the plant will be approved by the A.E.C. and N.Y.S.H.D. is poor business at its best! Perhaps the Company is charging far too much now and a substantial rate reduction is in order if they can afford to gamble 2 million dollars on mere excavation before any sign of approval is forthcoming. Or, are they that *certain* of "approval"?

Cayuga Lake is one of the deepest, narrowest and most "stratified" lake known. The lake simply does not "turn over" as most bodies of water should. It appears to be huge—about 40 miles long—perhaps a bit over a mile wide in parts—and a big hole 425 feet deep—it all sounds tremendous. However, it is a pathetically small body of water for cooling an atomic energy plant. As you pointed out, the upper layer of the lake will heat rapidly. "Far above Cayuga's waters with its waves of blue" will literally become far above Cayuga's ditches with its pea soup and green slime. We've already killed off most of the lake trout with the introduction of the lamprey eel via man's "improvements." That is "forgiveable." The loss of some fish simply removes an un"important" resource of fish and perhaps some of the recreation we now have to travel hundreds, even thousands of miles to enjoy (if it can still be found). But, what will be done when the water stinks? I imagine it will logically follow we will poison the water with chemicals to kill the algae growth. In any case we will not be improving the situation but rather we will make it worse. An atomic energy plant if it is built at all belongs out on the *sea* perhaps on huge Texas Towers with submarine cable connection to mainland areas. We are not seeking the best way—we are seeking the cheapest and most expedient way for the moment and to devil with the lives and needs of generations to come. In addition to the natural stubborn stratification of Cayuga Lake, bear in mind there are no tides to clear or change the water. Even with tide, man has made a mess in heavy industrial harbor areas.

I'd appreciate it if you had Professor Eipper and others drop me a line with their findings or opinions on this matter. The damage of misused or misplaced atomic energy plants is not a reversible process. I doubt, too, if N.Y.S.E.&G. will tear down or rectify a plant costing millions even if the dire consequences are proven. The natural inclination of the human animal is to show a very tough hide if the bankroll is jeopardized. Atomic energy plants have a place in our life if properly built in the proper place (as I've indicated a huge Texas Tower far offshore in deep water and submarine cable is the only relatively safe method I can envision at this time and at this stage of our technology). Yes, it is "costly" but in terms of life for an entire community it is *cheap* and practical.

Cayuga Lake will remain in my memory as a beautiful lake where my happiest years were spent. I hate to think of it as anything else. My own experience leads me to distrust small agencies of the State too easily influenced. If Cayuga is to be saved the people in the area will have to get busy and do it themselves now.

Sincerely,



Mitch Kurman



CORNELL COUNTRYMAN

VOL. LXVI

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ON THE COVER

Young people gather in Lincoln Park to hear Alan Ginsberg during one of the quieter moments of August in Chicago. See page 8.

PICTURE CREDITS

Cover—Jim Sheldon; pages 3, 8, 9, Jim Sheldon; page 4, Sol Goldberg; pages 10, 11, University Planning Office; page 13, Stephen Perrin; page 14, Jim Oliphant; page 15, The Ithaca Journal.

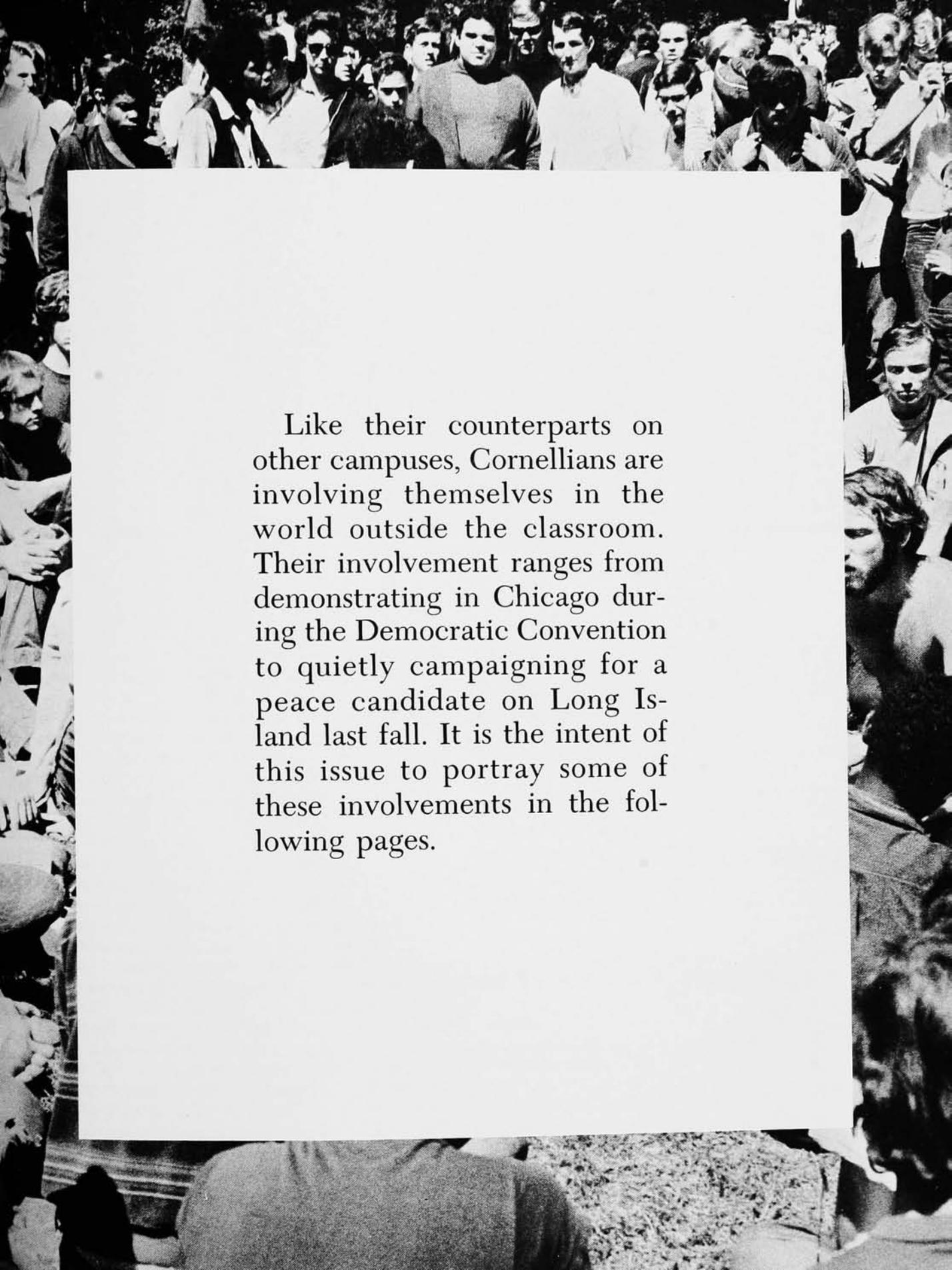
CORNELL COUNTRYMAN

FEBRUARY 1969/VOL. LXVI — NUMBER 5

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Like their counterparts on other campuses, Cornellians are involving themselves in the world outside the classroom. Their involvement ranges from demonstrating in Chicago during the Democratic Convention to quietly campaigning for a peace candidate on Long Island last fall. It is the intent of this issue to portray some of these involvements in the following pages.

LEARNING LAW THROUGH LEGAL AID

Cornell Law School Serving The Community

by MICHAEL HOGAN '69

"Can we accomplish anything meaningful within the system?" Since the beginning of the revolution in Chicago this summer, the question has been a popular one. For many members of the Cornell Legal Aid Clinic, the answer is an emphatic "yes".

Organized in 1961 by the Cornell Law School, the Legal Aid Clinic is a group of 60 second- and third-year law students who apply their skills to assist the needy. It is supervised by attorney Mrs. Betty Friedlander.

Tom DeWitt, Law '70, is president of the group. He said it was started by the Law School as a way to give students practical experience in working with legal problems.

"Actually," DeWitt said, "most of us see it as an opportunity to learn about dealing with people from a different kind of life. Legal aid societies are directed at people who can't afford to hire a lawyer."

The clinic's work is divided into civil and criminal cases. Criminal cases, DeWitt said, usually involve post-conviction review of alleged legal irregularities.

"Most of the criminal cases involve people who write to us from prison," DeWitt said. "They don't have too much to lose. We're trying to direct more attention toward civil cases in Tompkins County, where there's more need."

How do people with legal problems contact the clinic?

According to DeWitt, an office is open five nights a week in the North and South Side Neighborhood Houses.

"We also go down to the Neighborhood College Activities Center on Saturday afternoons," he said, "for people who can't see us during the week. The office at the Law School is open Monday and Wednesday. We only opened our offices in Ithaca last spring. Before that we didn't really have too much contact with people from downtown."

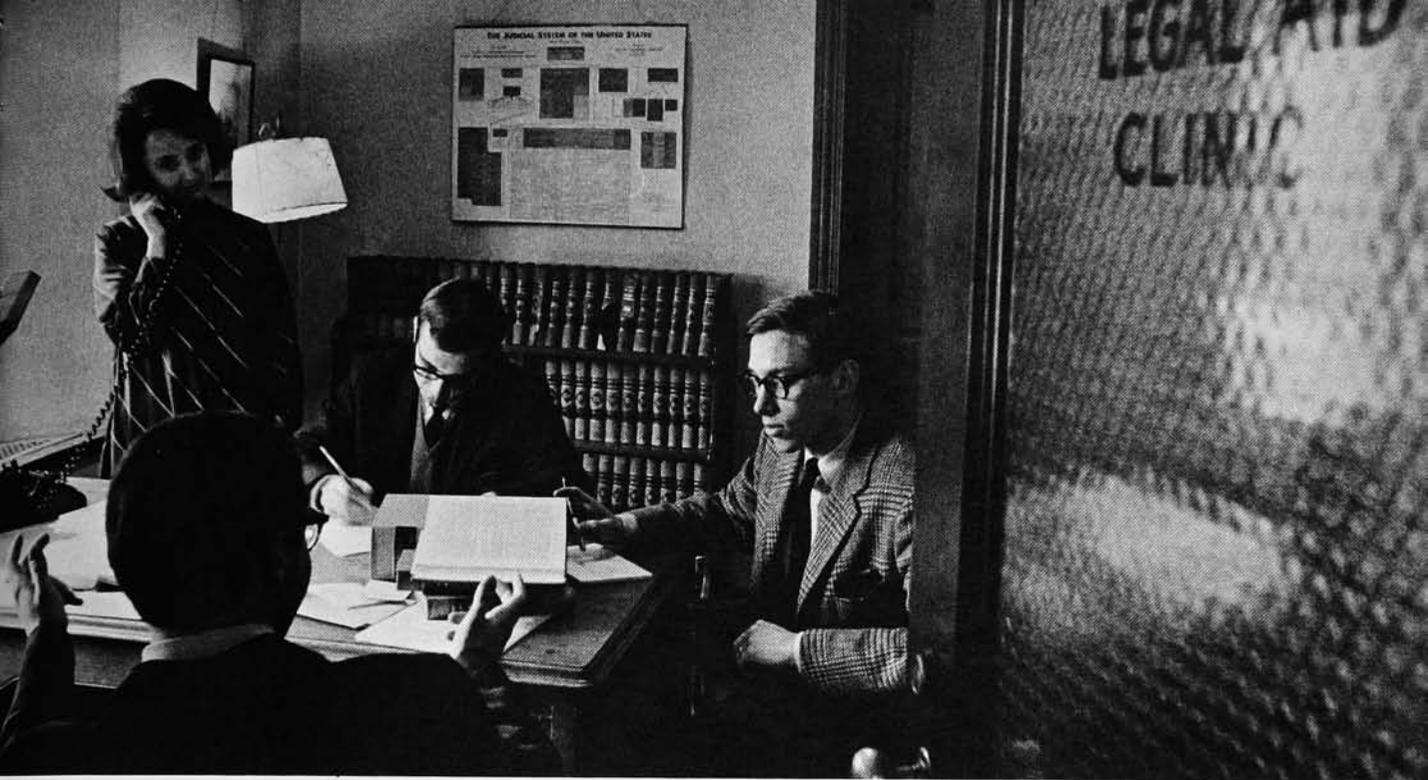
Town-gown relationships being what they are in Ithaca, there is probably some reluctance on the part of some townspeople to seek students' aid. DeWitt thinks good work by the clinic will bring it more jobs.

"There were about 120 applications for aid during the fall semester," he said. "We accepted about half of these as meeting our financial criteria. Most of the civil cases involved divorce actions, probably because of the recent liberalization of the law."

What is the future of the Legal Aid Clinic? Its president would like to see it as a year-round effort, coordinated by a full-time attorney.

"We do have a problem with continuity," DeWitt explained. "Vacations tend to break up the year, and people are reluctant to have to deal with several advisers. A full-time lawyer to advise us would provide continuity and more direction."

DeWitt said he thinks success in giving advice and



An applicant for legal assistance is interviewed in the Cornell Legal Aid Clinic's office in the Law School.

assistance to those in need of aid will bring the clinic toward its goal of expansion and greater relevance. Acceptance by the whole community is a key step in the future.

"We don't think we've gotten the publicity we should have," he says, "and this is probably one reason more people don't make contact with us. On the other hand, if we prove ourselves by consistently doing a good job, we'll be accepted. It's more than simply talking about what we can do."

The Legal Aid Clinic faces several barriers in dealing with students who apply for help. Although there are many students with genuine problems, most members of the clinic agree there is a greater demand for their knowledge among Ithacans. The peculiar financial status of students is also a problem. The standard of income used to determine eligibility is much more difficult to apply to a student than to a wage earner. According to DeWitt, the standard approximates Federal poverty levels, and is relatively inflexible.

"We have to avoid trespassing on ground that really is the bar's," he explained. "We have a good working relationship with the bar in Ithaca."

The Legal Aid Clinic does accept some student applications, although applying a somewhat stiffer level of eligibility. Some areas, such as tenant contract problems, involve more students than townspeople. The clinic

accepts cases with student applicants when they are particularly important.

DeWitt said another area in which the clinic might expand is to carry aid to people in districts around Ithaca.

"If we could go around to outlying districts on a regular schedule," he thinks, "we could be useful to people throughout Tompkins County. There are a number of ways we might do more than we are now, but most of them could only take place in a couple of years, after we had won the confidence of the people more completely. Again, this is a matter of proving ourselves. Any direction the clinic takes in the future depends on what we accomplish on a day-to-day basis."

DeWitt also says the experience law students get in dealing with their clients is apt to affect their choice of profession.

"There have been several people who have gone into poverty law as a result of their experiences here," he asserted. "This is really a pretty important direction. A lot of other students plan to include poverty law work as part of their regular practice."

Law students in the Legal Aid Clinic are in the right place to change the score while staying in the game.

"We're in a tremendous position to help people who need it —" DeWitt said, "to bring about small changes within the law and *through* the law."

I Was A CORNELL Drop-out

by F. C. BARRY '70

The easiest way I have found to approach the practice requirement is to be faced with a mandatory leave of absence from the New York State College of Agriculture at Cornell.

Biological Sciences and I took leave of each other after some five semesters of striving to systemize the knowledge I didn't have. With pride in hand, I walked into that cold, dark world of the "establishment." Still unaware that I could never be the biologist I had dreamed of being, I headed for Roswell Park to seek a laboratory job that would permit me to prove to Cornell that I was a competent scientist. After the initial interview, I was shocked to discover that they felt five semesters of biology was worth one hundred dollars a week – washing test tubes.

At that point, I decided to trash-can my entire academic background, smash all the moulds my dreams and teachers had forced me into, and regroup.

Hoping to be able to return to Cornell to major in Communication Arts, I sought positions that would fulfill the practice requirement for graduation in that area. I answered ads from Buffalo to Boston and found short-term training to fill the gaps.

Gradually I learned that the business world within which I was moving served as a valuable laboratory for testing new facets of my personality and creativity. Much to my surprise, I discovered what an artificial world academia had been for me and, happily, what an excellent teaching laboratory the job became!

But which job? Sylvania Electronic Systems needed a technical writer, and I happened to be in the right place

at the right time. Engineers they had; writers they needed. I was made aware that the universities are five years behind the trend.

Nowhere on the Cornell campus could I have gained the practical experience Sylvania offered. Their sole product was communications equipment for the Armed Services and it would be my assignment to write the handbooks explaining theory, operation, and maintenance.

Not having a dossier of by-lined articles which had appeared in technical journals, I was faced with convincing them I was the man for the job. The salary level was such that I knew I would have to over-achieve in order to meet their expectations. You see, I was a drop-out.

This extended practical experience of eighteen months gave me an opportunity to make the mistakes, assimilate the constructive criticism, and produce an acceptable result.

Maturation was an important by-product. Real problems abound in the world that this drop-out entered, and the first one was breaking the communications code universally used throughout the defense industry: "PDC's were CT'ed in order to DSR the equipment." Acronyms cluttered everyone's speech. It was like learning another language.

As my thoughts turn to Ithaca, I cannot help thinking about how most of my former classmates have graduated, and are getting their feet wet as I already have. One stepping stone will keep their heads a bit higher above the surf, however. They are standing on a diploma.

To Act—

Political Involvement

by IRA LIPSKY '69

Early in the fall of 1968, Allard Lowenstein, then a Democratic nominee for Congress, addressed a large Cornell audience in Bailey Hall. Lowenstein, credited as being one of the initiators of the "dump Johnson" movement, and an early backer of Senator McCarthy's presidential campaign, told the gathering about incidents he was involved in at the Democratic Convention and answered questions from the floor. He was particularly effective, and made a deep impression on this writer, by refuting a student who asked, "What's the use of trying?"

Outside the auditorium Lowenstein's student supporters had placed sign-up sheets, for those wanting to work for their man. I signed one of the sheets, and for the first time in my life, physically involved myself in a political campaign.

Compared to the protests, sit-ins, and marches, in which many other students have participated, my gesture was rather weak, but it was a positive movement.

Three days after volunteering my services I received a phone call asking if I would drive to Long Island on the coming weekend. Two quick stomach knots later, I agreed. I met my five other passengers, all students, early Friday afternoon, and started the six-hour trip to the Fifth Congressional District.

Years of watching Hollywood's rendition of politics left me completely unprepared for my entrance into the campaign headquarters. As I pushed open the door, my mind registered "Welcome to Pandemonium." All around me were students, their ages varying from high school to graduate school. Bare feet, miniskirts, jeans, weejuns, phone calls, sweatshirts, mimeograph machines, running, walking, yelling, pens, pins, buttons, all were there—everywhere.

I was welcomed, registered, told where I would sleep, and asked to do some work. In that atmosphere, a negative response would have been the supreme sin, so I settled down to address envelopes, and await the arrival of the candidate.

Shortly after 1 a.m., Allard Lowenstein arrived at his headquarters. That night he had attended three campaign functions, and was obviously tired. But it was impossible

to be exhausted in those surroundings. The enthusiasm and vitality of his entire campaign permeated everyone in the headquarters building, as we gathered around him for a briefing on the following day's canvassing.

We were told that we had an up-the-mountain struggle ahead of us, that the district was overwhelmingly Republican, and that Lowenstein's Democratic support was split, due to his refusal to support Humphrey.

A primary factor in Lowenstein's campaign was the personal canvass. A face-to-face meeting with the voters was the best way to change or reinforce their opinions. I was to be a canvasser.

The following morning I went to my assigned storefront headquarters, and was again briefed. I was told not to argue with anyone, but to readily engage in conversation with any voter who so desired. I was given a map, a shopping bag full of literature, and a list of names and addresses.

Fortunately, the first person I had to visit was listed as a Liberal. I cleared my throat, checked my appearance in a nearby windshield, and rang his doorbell. When he opened the door and spotted my button, I noticed with relief that his lips were spread in a wide grin. We spoke for a few minutes like two old friends. He told me not to waste my literature on him, but to give it to someone who needed convincing.

I had said good-by and was turning away when he grabbed my hand, and shook it again. "Thanks, son, thanks a lot for what you're doing."

During the remainder of the morning I visited approximately 60 people. None were openly hostile; some said they were not interested; others said nothing. About ten of the 60 were strong Lowenstein supporters, and the feeling I received talking with them could not be dimmed by any number of setbacks.

Although I have received letters from Mr. Lowenstein expressing his thanks for my participation, I feel that I am the one who should be appreciative. For he instilled in me the desire to act. Allard Lowenstein won his victory, and I won mine; he became a congressman, and I became involved.



by JEFFREY MANFREDI '70

I went to Chicago and never knew why — maybe it was to see America. It wasn't a city under seige when I got there — people were feeding pigeons, mothers pushing babies: sunshine and a breeze from Lake Michigan, political talk thick in the air, peanut venders with Humphrey stickers and the blue-shirted, big-stomached cops as thick as soldier ants protecting their queen. Taxis squealed 'round corners, balloon men sold McCarthy pins. There was lots of sunshine in Chicago when I got there on Monday, August 26. I should have recognized it for the sign it really was.

I didn't do much that afternoon — visited some old friends but didn't meet any new ones — made plans to

go to the Lincoln Park Zoo at night. John and Al would be there about 10 p.m.

The city was for walking around 'til then — through Old Town and a few beers at the store where Lenny Bruce broke the obscenity barrier years ago. Went on over to Shad Aquarium to take the fish in — very impressive place. They don't have an octopus like New York but Chicago's not New York. They may have been comparable once but the last week of August changed things.

I got to the zoo on time on a warm and quiet night, meeting my friends. We decided to skip the monkey and reptile houses, go straight over and watch the



radicals clustered beneath the elms: talking, singing, listening, smoking, agreeing and arguing with each other.

Kids in their teens keeping busy, trying not to show the uneasiness they felt. College kids undecided about a revolution in America. The over-thirty types easily recognized because of the energy they used trying to look young and trustworthy. They were the ones most apprehensive about a night in the park. Perhaps they knew Chicago is the butcher for the world. Perhaps they knew the city called the cops together, gave them guns and masks and mace and sent them out to keep the streets and avenues safe from communism.

Alan Ginsberg was there – his mystical “om” chant filling the air in the park. It was a powerful thing to hear – if the walls of Jericho were still around they might have crumbled in the night.

We didn't have a chance to listen too long. Hundreds of cops, appearing out of the darkness like an army from another country, waded into the crowd. Instead of singing and talking we heard screaming and crying

and the crack of clubs on heads – crazy laughter and the sounds of panic.

Like everyone I began to run – away from the horror and then back into it – burning clouds of tear gas in a sort of frantic alley with nowhere safe to go. A girl against a tree with bloody face crying softly – I grabbed her by the arm to pull her from the clubs.

Running under the moon-canopied elms, the girl kept crying – kept trying to stop but couldn't because she wept from fear. I didn't say a word as we ran toward Lake Michigan, trying to wipe blood from her face and hair.

Closer to the lake we saw the cops again with their snout-like masks – the profiles of pigs that night. I had to laugh, bringing a smile to the girl's face. She grabbed my arm, tightly, as if I were saving her – “You're crazy . . .” she said.

“You're saving me,” I answered. And as we ran from the cops and their chaos I drifted into a dream I still remember. . . .





This is how the slope across from Willard Straight Hall will look about one year from now.

Shapes of Things to Come

by MARTIN SENNETT '70

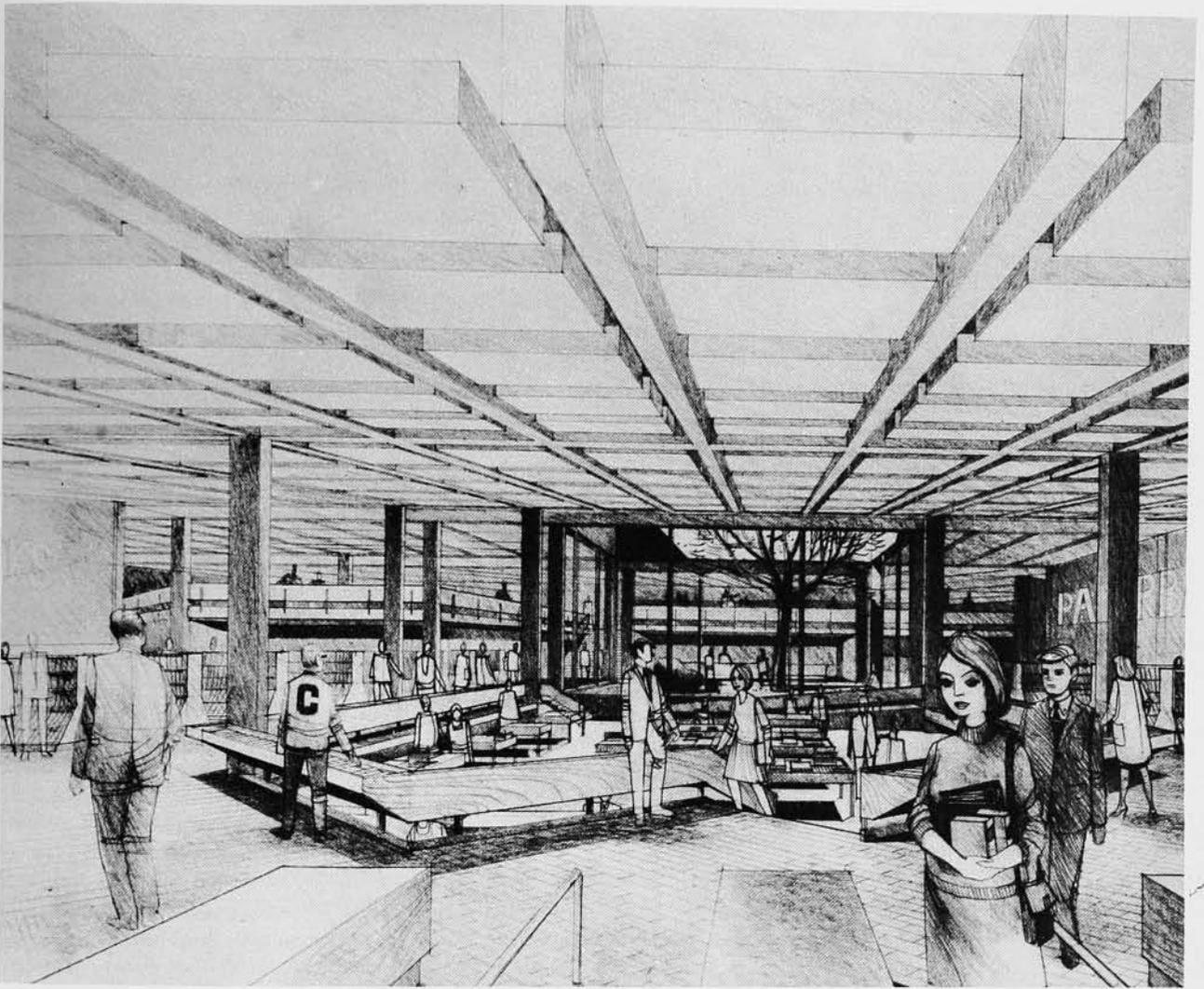
By December 1, 1969, the gaping hole that presently occupies the area between Barnes Hall and Sage Chapel will have been transformed into the most unusual building on the Cornell Campus. As the new Campus Store is completed, the luxuriant growth of graffiti that now surrounds the site will be replaced by more sober texts of a different nature.

As conceived by Earl Flansburgh and Associates, the new structure will represent a skillful combination of functional and aesthetic considerations. Designed to meet the growing needs of the Cornell community for improved and more efficient service, the new store will

replace both the Barnes Hall and the Sheldon Court operations.

The decision to place the store underground was based on several considerations. James Yarnell of the University Planning Office noted that aesthetics was foremost in the minds of the planners. Both Sage Chapel and Barnes Hall are classic examples of a particular architectural style, he explained, and there is a great deal of sentimental attachment to the buildings. For this reason a structure was required that would not detract from their unique appeal.

Secondly, Yarnell stated, that particular area receives



Inside view of new campus store.

a very heavy volume of cross campus traffic, and an above ground building in that spot would have seriously disrupted traffic flow.

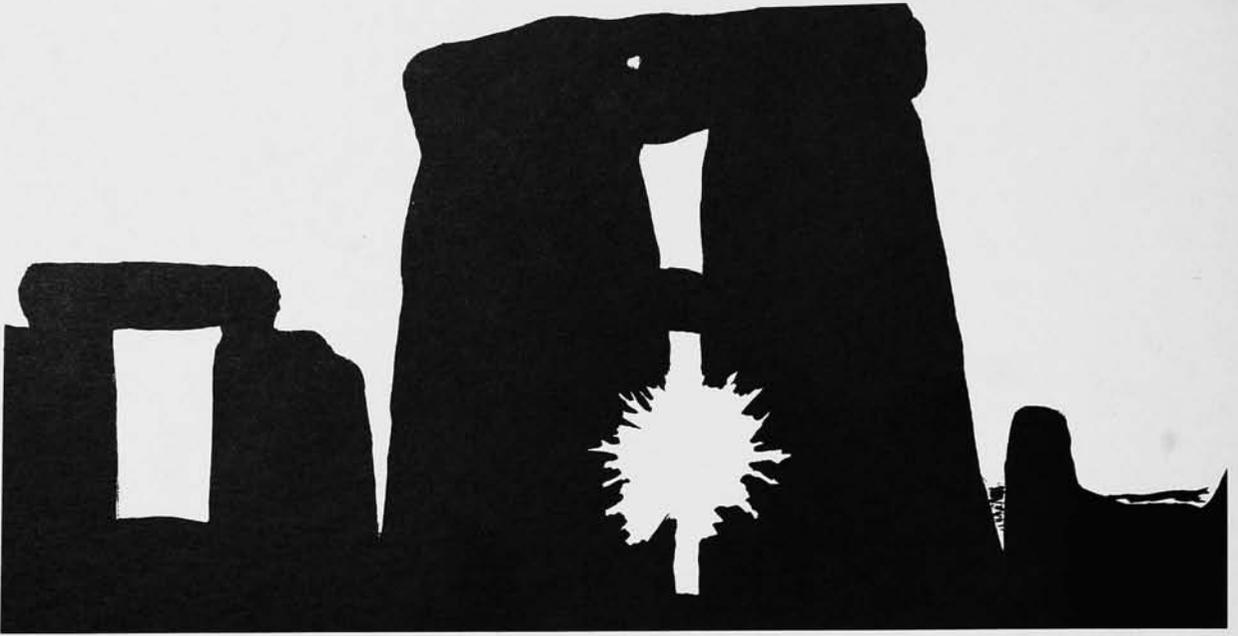
When the new store is completed it will contain some 20,000 square feet of selling space, more than double the area of the Barnes Hall and Sheldon Court stores combined. The three-level building will feature wide aisles and a spacious design that should go far toward eliminating the serious congestion that plagues the present Campus Store.

The services offered by the store will be essentially the same, although many areas such as records, greeting cards, and photographic equipment will be expanded to offer more variety and a better selection. In addition,

convenience items such as toothpaste, soap, etc. will be added to the store's inventory.

Mr. Philip Krebs, manager of the Campus Store, said that he hoped to be able to open the store in time for the Spring, 1970 semester. "If construction is completed on time," he said, "and we are able to move in without too much trouble, we should be ready for the February book-buying rush."

When the building is completed, a layer of earth at least a foot thick will be laid over the entire structure, and the area will be completely reseeded with grass. Trees will be planted to replace those that were destroyed in the construction and in time the area should be even more attractive than it was before construction began.



The Mystery of Stonehenge

by ROGER BECK '71

While touring Europe two summers ago, my companions and I visited that unusual arrangement of mammoth stones on the Salisbury Plain in southern England called Stonehenge. Looking at these huge stones standing on a slight rise, blocking out the sky, we asked ourselves the same questions men have been asking for hundreds of years: "Who built Stonehenge? How did they build it? And why?"

Stonehenge is laid out as a series of concentric circles. The outermost circle is a large ditch. Inside it is a low bank of earth that may once have been a wall six feet high. Then there is a ring of evenly spaced holes dug in the earth. Toward the center are huge sandstone blocks, which originally formed a circle 100 feet in diameter. Smaller blocks called lintel stones rest on top of the upright stones, joining them into one continuous ring. Inside this ring is a circle of smaller bluestones, then sandstone blocks arranged in the shape of a horseshoe. Inside this horseshoe is another one formed of bluestones.

What does this arrangement mean? Some people thought that Stonehenge was an old Roman temple, while others insisted that it was a court built later by the Danes. Still others said that Merlin the Magician had whisked the rocks from Ireland in a single night.

In the 1700's and 1800's, the most popular idea was that Stonehenge was a temple used by the Druids.

In 1901 a British astronomer, Sir Norman Lockyer, had another idea. Standing inside Stonehenge at dawn on June 21, the longest day of the year, and looking through the opening of the two horseshoes, he saw the midsummer sun rise over a large, pointed stone called the Heel Stone. Sir Norman noticed, too, that the sun was not centered directly over the stone, so he computed the year in which the sun's position would have been directly over the point of the Heel Stone and found it to be 1800 B.C., long before the Romans or the Druids.

Later, an archeological expedition headed by Professor Richard Atkinson found bits of pottery, jewelry, and weapons around the site. From these they deduced that a series of tribes had settled around the present site of Stonehenge and had used it as a corral, temple, and meeting place.

Today it is believed that a wealthy group of people called the "Beaker" people formally started the erection of Stonehenge as we now know it.

They chose 80 stones, called bluestones, weighing as much as six tons each, and hauled them from the Prescelly Mountains in Wales to the present site of Stone-

henge, about 380 miles away. The stones were transported to the ocean, lashed to rafts, and sailed along the coast to the mouth of the Bristol-Avon River. Dug-out canoes fastened two and three abreast carried the stones upriver. Between rivers, men pulled the stones on rollers.

The assemblage of these stones was completed in about 1400 B.C., some 400 years after it was begun.

In 1923, Dr. Herbert Thomas of the British Geological Survey proved that the Stonehenge rocks match the bluestones from Wales perfectly. Later, he determined the most likely route used from Wales, and the discovery of a 600-pound piece of bluestone in a grave near one of the rivers on this route supports his idea. It matches the Stonehenge bluestones exactly, and it may have been one of those abandoned along the way, centuries ago.

Professor Atkinson still was not sure that such heavy stones could be handled by men using only rollers and rawhide rope. In 1954 he cajoled a group of English school boys into trying it. They used a cement block the same shape and weight as a bluestone. Moving it over land and water wasn't fun, but they proved it could be done.

Another question to be answered was how Stonehenge's artisans shaped and polished the mammoth rocks. With 50-pound stone hammers as clues, archeologists guess that the workmen heated the rocks with torches where they wished to make a cut. By pouring cold water on the hot rock, they weakened the stone so that it would break smoothly when pounded by the hammers. The final shaping and polishing was done by teams of men who pounded the stone repeatedly, and pulled grinders over its surface.

Modern workmen use a strong crane to lift a fallen lintel stone on top of two upright stones. But the builders of Stonehenge had only lumber and rawhide rope. With these alone they set huge stones upright

and lifted 7-ton lintel stones to the tops of the columns. The bluestones were then set up inside the ring of sandstones.

Dr. Gerald Hawkins, a young astronomer, in 1961 hoped to prove that Stonehenge had some astronomical value. He reasoned that an ancient people needed a calendar to measure the seasons in order to know when to plant and harvest their crops. We have seen how the Heel Stone points out midsummer. Dr. Hawkins wondered if some other stone points out midwinter.

He discovered that different arrangements of stones lined up with 24 places where the sun and moon rose and set in the seasons of the years around 1500 B.C. If Dr. Hawkins is right, this means that Stonehenge was both an astronomical observatory and a calendar. By standing in different places, the builders of Stonehenge could predict when the sun and moon would rise or set in midsummer or midwinter.

Dr. Hawkins was puzzled by the use of the 56 holes in the outer ring. Having studied the times of the years when there are eclipses, he found that they take place in 56-year cycles. For instance, if there were an eclipse at Stonehenge in April of 1578 B.C., there would be another in April of 1522 B.C. — 56 years later. There would be many other eclipses in between, of course, but it would be 56 years before it would occur at exactly the same time of the year again.

If Stonehenge were built to be used in this way, its builders must have known what happened in the skies over a period of more than 300 years, and passed the information along by word of mouth.

The mystery of Stonehenge is slowly being revealed. One thing is sure, though. Stonehenge will continue to fascinate people even if the mystery is solved. For the more we learn about Stonehenge, the more remarkable it seems.



An Honorable Alternative

by JAMES OLIPHANT '69

Three facts about your life are certain. One, you will get a job; two, you will get married; and three, you will be the target of the draft. Most men will choose their mate and focus their talents toward a vocation. But there is little a healthy college graduate can do in a decision about the draft. *Uncle Sam wants you* and aside from running to the ice pole or setting stakes in prison, military service is a fact of life.

Granted, two years as an army private is not fortune or fame. This, however, does not have to be your way. For the Army offers two programs: the Army Reserve and the National Guard. Both programs are essentially the same in respect to training and total time commitment. The National Guard is primarily designed to protect the nation in times of national crisis. However, in times of international crisis, both the Army Reserve and the National Guard are subject to call into active duty overseas.

In reviewing the training and total time commitment of these programs, the advantages for some college students to join are clear. Each reservist or guardsman spends eight weeks in basic training. Upon completion of this training he begins his instruction in a "specialty" which is requested and nine times out of ten is granted. "Specialties" range from mechanics to medics, clerks to intelligence and communication operations.

At the completion of this specialty training, active duty is terminated. For the next five and one-half years the reservist or guardsman is "on reserve." He must attend 48 drills each year, usually held bi-weekly, and an annual two week summer field training camp.

Jeffrey Unterman, a graduate of Columbia University Law School, 1964, elected, upon completing his graduate studies, to enter the reserves. "Getting your active duty out of the way is a relief," Jeffrey related. "I was able to concentrate on my studies without fear of having them interrupted by the draft." Philip Cutler, a graduate of Michigan State University, 1967, chose the National Guard. He states, "I'm able to work during the day and

attend night sessions. There is no difficulty in meeting drills as my boss understands my situation and willingly gives me time off. Nor does the summer camp pose a problem."

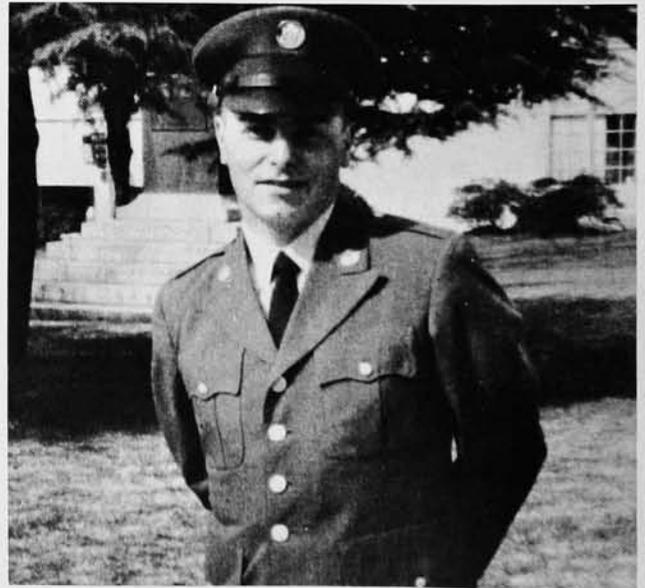
Many students complete their active duty before they graduate from college. Jerry Godfry, College of Agriculture, 1970, completed his active duty in the National Guard before transferring to Cornell from the State University in Farmingdale, Long Island. Jerry attends bi-weekly meetings with his unit in Binghamton at the present time.

Another facet of these programs is that members can transfer their attachment to a unit from one area to another. For example, Jerry, while attending the State University in Long Island, was attached to a National Guard unit in the New York City area. Upon transferring to Cornell, he was able to transfer to a unit in Binghamton.

Many students discover these programs late in their senior year and they think their chances to enlist before graduation are minimal. This is not true. There are numerous examples where those who signed a waiting list one month prior to graduation were accepted immediately after commencement exercises.

Individual circumstances will, of course, dictate different decisions concerning one's choice in fulfilling his military obligation. By no means are the National Guard or the Army Reserve the only or the best choices. They are, however, an honorable alternative for the healthy college senior or undergraduate not enrolled in R.O.T.C. and in search of something besides the draft.

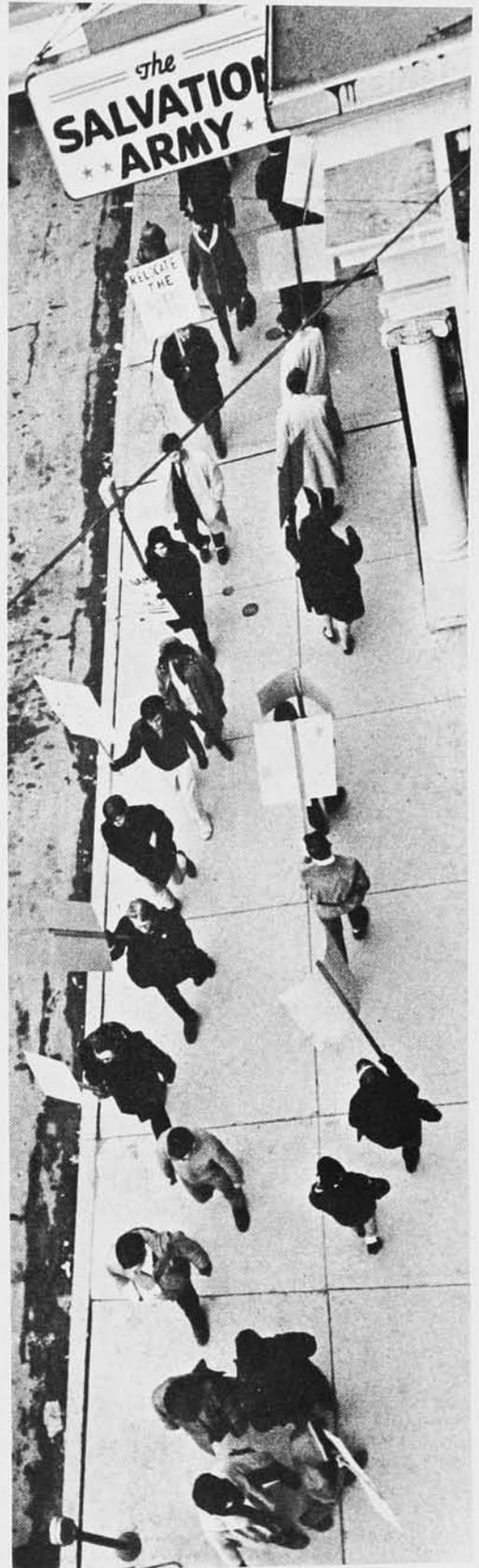
Jerry Godfry, '70, completed his active duty with the National Guard before transferring to Cornell.



INVOLVEMENT IN ITHACA



Cornell students, eager to take their stand on critical issues, frequently participate in peaceful demonstrations in the Ithaca area.



WHERE IS AGRICULTURE GOING?

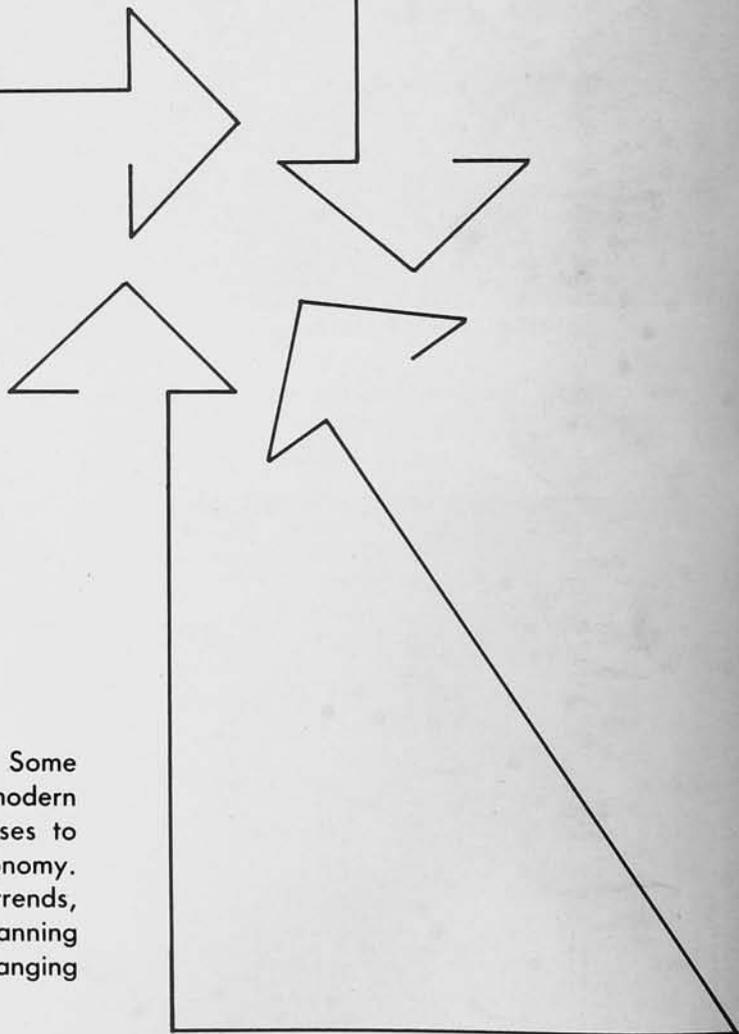
THE STATE, NATIONAL AND INTERNATIONAL ASPECTS
OF THIS THEME WILL BE DISCUSSED
BY FIVE OUTSTANDING SPEAKERS
AT THE ANNUAL . . .

AGRICULTURAL LEADERS FORUM

TO BE HELD THURSDAY
MARCH 27, 1969

IN ALICE STATLER AUDITORIUM
AT CORNELL UNIVERSITY

Change continues to characterize agriculture. Some changes are dictated by forces within the modern agricultural complex while others are responses to developments for other segments of the economy. The Forum will identify probable national trends, changes in labor relations, influences of planning and urbanization, and the forces that are changing the dairy industry.

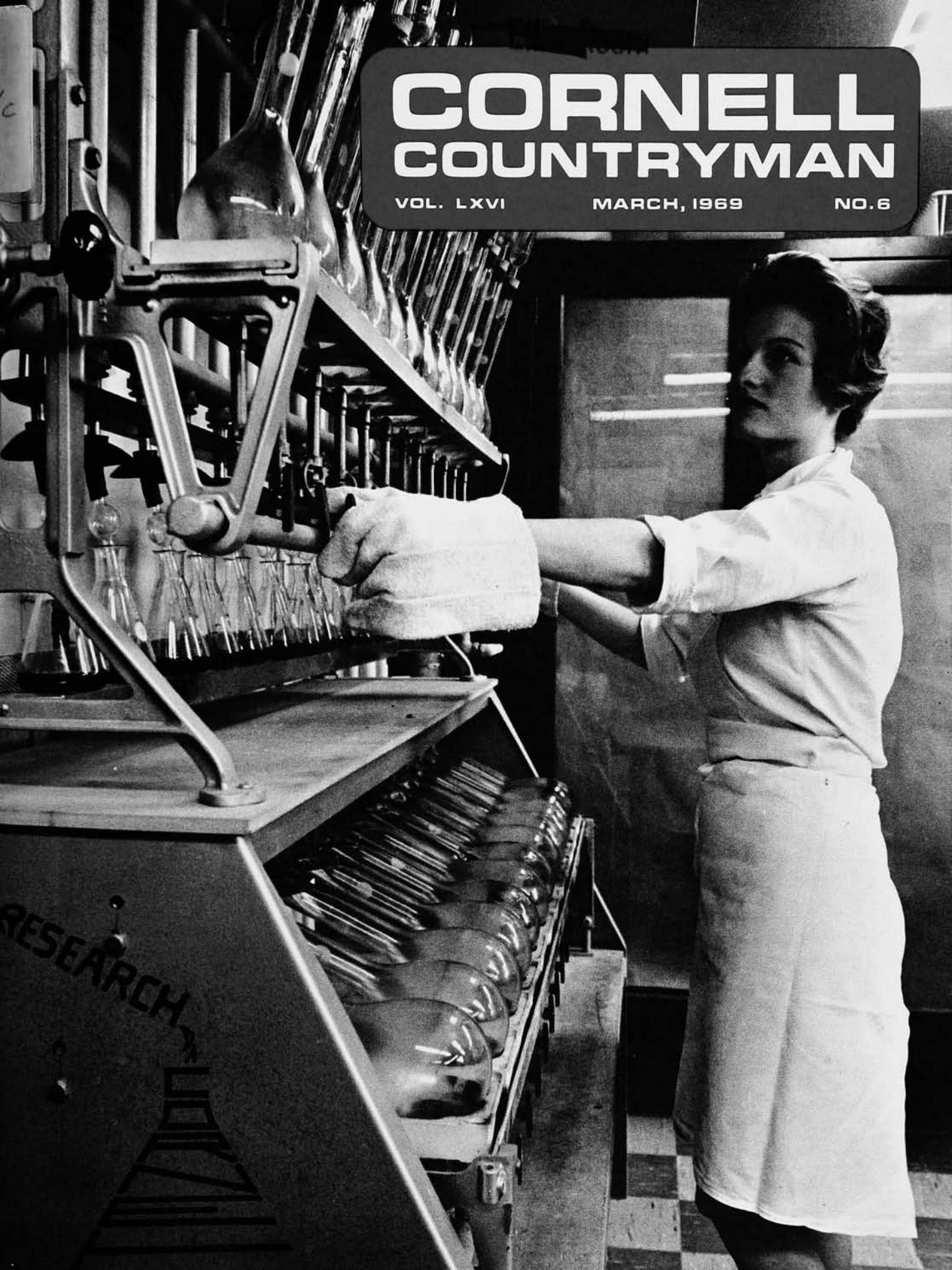


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NO. 6



RESEARCH

ON THE COVER

An assistant works in a Kjeldahl lab on a chemical scheme designed to determine the amount of nitrogen in fertilizers.

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SAGE CHAPEL

by CHRIS AGER '71

Every day, hundreds of students make the trip between the Straight and the arts quad, and every Sunday services are held in the odd little building between the new campus store construction and Olin libe, but how many of us have ever made an effort to just go in and look around this chapel, which has been serving the Cornell community since 1875?

The original chapel and two of the three major additions were designed by Cornell's first professor of architecture, Reverend Charles Babcock. When one enters the north door, attention is immediately attracted to the Sage Memorial Apse on the east side of the

main auditorium. Beneath it are buried the donor of chapel and his wife, Mr. and Mrs. Henry Williams Sage. The apse and surrounding area are completely covered with mosaics and paintings.

The floor in front of the apse has a mosaic of the vine of truth. Inside the half dome of the apse itself are paintings of Michael, Gabriel, Uriel, and Raphael, and four angels. Below this is a stained glass window depicting various biblical stories such as the Good Samaritan, the Prodigal Son, and the Lost Piece of Silver. The entire window is in memory of Susan E. Linn, the wife of Sage. Below the window and covering the inside of the apse is a mosaic representing philosophy, the sciences, the arts, truth and beauty. The pulpit to the right of the apse is a Gothic design, carved from Caen stone that was donated by the Sage family.

To the left of the apse is the memorial ante chapel, in which are stained glass windows and plaques commemorating great men of education including Elihu Yale, John Harvard, and Queen Jeanne of Navarre.

At the opposite end from the apse are the organ and mausoleum. The mausoleum, which is now sealed off, contains the remains of Jennie McGraw Fiske, her husband Willard, John McGraw, President White and Day, and Ezra Cornell. The plaque outside the mausoleum was dedicated in 1883 by Grover Cleveland.

Beneath the great rose window depicting the twelve apostles is the huge Aeolian-Skinner pipe organ which was installed in 1940. The original organ, a gift from the son of the chapel's donor, served until 1909.

Perhaps the most impressive part of the Chapel is the roof. The building is simply a huge shell, supported inside by several partial arches. These arches and the ceiling are ornately painted with colored bands and zig-zags. On the ceiling itself are symbolic paintings representing truth, hope and patience, piety, wisdom, and Christ.

This building can hardly be examined in any detail in less than half a day, and perhaps this is why so much of its beauty is unnoticed by many students. For those who can spend the time necessary to study it, however, Sage Chapel can serve as a museum of Cornell's history.



The Sage Memorial Apse, where Henry W. Sage, the donor of the Chapel is interred.

The Age Old Problem of LOVE

by JOE KELLEY '69

Do women really "tune out?"

Mark Goldstein, a Ph.D. candidate under the direction of Professor Harold Feldman in Cornell's Department of Child Development and Family Relations has been searching for the answer to this question for one and a half years, and finds himself coming to the cautious conclusion that, maybe, women do tune out, or stop really hearing what their husbands say.

He calls it a "lack of communication in the marital diad." And to find out how and why this communications failure occurs, he is studying both marital and pre-marital couples. Now, most of his laboratory subjects are single college-age women.

Goldstein explained that person to person communication involves two factors: input and output. Output is not too complicated, and the better understood of the two. It simply involves the process of speaking. Input, unlike speech, is invisible, and therefore difficult to measure, involving the actual "storage" in the brain of what the listener hears, or in Goldstein's words, "attends to."

"You can be looking straight at me, and not process a thing I say. And what's worse, I have very few ways of measuring exactly what you do process," he stated.

Goldstein, who received an M.A. in child development at Columbia University, sees communication as "crucial to the marital diad," and, in light of some of the research that has been done on this communication, his beliefs are certainly warranted. Goldstein's clinical observations suggest that "less than half of the output in marriages ever gets listened to."

"My research is aimed at challenging the naive assumption that everything that comes out of the mouth as words goes into the other's brain as thoughts," he said.

Goldstein has devised a method for measuring intake by subjecting the women to "dicotic listening." The ladies don earphones, and then listen to a tape that pumps one question into one ear and another question into the other, at the same time.

Goldstein says that it is cognitively impossible for the subject to attend to both questions at the same time, so the women answer only one of the two questions they hear. From their answers, the researcher can measure what kind of information women of this age group prefer, and thus guess which parts of their husband's or boyfriend's conversation they really hear.

The psychologist said that essentially what is happening is that the listener unconsciously "blocks out" the information entering one ear. This blockage is so complete that the listener can not remember whether or not the voice giving the blocked information was male or female, or even the language in which the information was spoken.

When he has obtained enough information about this particular female age group, Goldstein, who is a clinical psychologist for Schuyler County, will measure the intake preferences for men of the same age, and later for couples of older age groups.

He hopes the information will not only prove his hypothesis that, over time, "less and less information is received by the members of the couple," but also provide some clues to how communication within a married couple can be increased to help solve marital problems.

"Rather than turning on, tuning in, and then dropping out, couples will just turn on," Goldstein concluded.

Goldstein watches as a subject tries out his dicotic listening test.



Are The Continents Sinking?

by SUZANNE SMITH '70

Stories of vanished islands have persisted throughout the ages. Almost everyone has heard of the lost island of Atlantis which is rumored to have sunk into the sea thousands of years ago.

The "sweet land of Lyonesse," a tract of land fabled to have stretched between Land's End in Southern England and the Scilly Isles, is thought to be submerged some "40 fathoms under water."

Such tales may lead one to question the future possibility of today's land masses disappearing into the ocean.

Associate Professor Arthur L. Bloom of the Department of Geology has spent several years researching questions directly related to the "drowning" of land which was once part of the earth's surface. Although most of his work has centered around coastal

areas in Connecticut and Maine, Bloom has also traveled to Micronesia to explore similar problems in the coral reefs.

Studies made by Bloom contribute to knowledge of the effects the ice age has had on the earth's surface. Bloom has shown that continental areas have bent under stresses as low as those imposed on the ocean basins by the post-glacial rise of sea level and, in addition, areas of the ocean basin have been deformed under the load of the same post-glacial rise of sea level.

The geologist notes that one of the major problems of studying ice age geology is determining the effects that changes in sea level caused by glacial melting have had on land masses all over the world. Since all the seas are connected, it should be possible to measure and correlate changes in different areas. Bloom's work has indicated that steep coastlines bear a heavier water load than shallow coastlines and therefore experience greater bending. The amount of bending is measured by collecting samples for radiocarbon dating, which also indicates the age and rate of post glacial submergence.

Bloom also notes that the sea level is rising as much as three or four times more rapidly than in past centuries. This phenomenon, he says, may be attributed to certain climatic changes that have resulted from the industrial revolution. Apparently the release of industrial gases have been heating up the atmosphere, causing certain glacial deposits which still exist to melt at an unusually rapid rate.

Commenting on the possibility of existing land masses disappearing into oceanic depths, Bloom said that it can certainly be predicted that some changes in coastlines will continue to occur, but that disappearance of land masses is a bit unlikely.

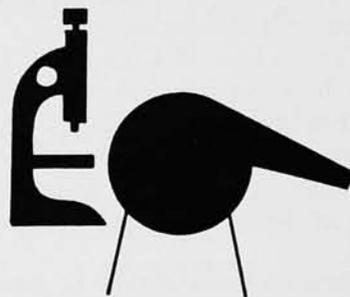
As methods of measuring continental bending are perfected, geologists will be given new insight into the histories of areas which once rose above the waters but have since submerged beneath the seas.

*Circular patches of *Spartina alterniflora* cover an area that used to be a tidal flat give evidence to the sea's rising.*



A CURE FOR CANCER

by **BARBARA GEITHEIM '69**



Some students would tire from the long hours that Alex Lange, Arts and Sciences '69 spends in laboratory research. But Lange, who is searching for clues to the human body's energy mechanism, says he finds the lab work "exhilarating."

The young chemist is studying protein coupling factors in hope of uncovering a cure for cancer.

The research work in Wing Hall is being funded by grants including one from the National Institute of Health. The grantees are funding this research with the hope of adding a significant body of knowledge to the yet unclearly understood energy control mechanism of the body's cells. This mechanism is located in the mitochondria, the cell's tiny energy furnaces.

Lange said that this work may be helpful in understanding the energy systems of cancerous cells, "since the energy control mechanism is different in cancerous cells than in non-cancerous cells."

"A cancer cure is not necessarily imminent, however," he cautioned, "as a result of this experiment."

The research work currently being done at Cornell is under the supervision of Assistant Professor June M. Fessenden-Raden, Ph.D., of the section of biochemistry and molecular biology, Division of Biological Sciences.

Mrs. Fessenden-Raden's research in this area is specifically to isolate and purify the coupling factors associated with the energy control mechanism in body cells. Technically speaking, her work can be explained by the ominous phrase, "the elucidation of oxidative-phosphorylation by studying factors which couple the electron transport chain to the phosphorylation of Adenosine triphosphate (ATP) from inorganic phosphate and Adenosine diphosphate (ADP)."

Exactly what this process involves, Lange explained, is not yet ready for publication. He said that all that can be related concerning the experiments so far is that he is "purifying these coupling factors, and experimenting with them."

"These coupling factors are speculated to be enzymes, a type of protein," Lange noted.

Of course there is the possibility, skeptical though it may be, that Lange never will find what he and Mrs. Fessenden-Raden hope to be a clue to a cancer cure. But Lange, working tirelessly in a lab few people know exist, seldom stops to consider this possibility. His undaunted search for new knowledge is typical of the great variety of research that is forever seeking, forever questioning, not only at Cornell, but around the world.

A BETTER DIET FOR HORSES

by MARYA DALRYMPLE '70

"Few Cornellians are aware of our research since it is fairly new," states Dr. Herbert Schryver, director of the Cornell Equine Research Program, which is working to determine exactly what the nutritional requirements for horses are, and what relation they have to bone, joint, and other diseases.

Horses, for both recreation and racing, are becoming more and more popular, but horse diet research has not been able to keep up with this "horse boom."

The importance of the program's inception coincides with the horse boom that is occurring across the United States. However, there has not been a similar increase in the research on physiology, nutrition, and diseases in horses. In fact, the latest information available to horse owners about feeding comes from a booklet, "Nutritional Requirements for Horses" published by the National Academy of Sciences in 1961.

The figures cited in this brochure were probably derived from the nutritional requirements for cows, not horses. Consequently, it is one of the goals of the Equine Research Program to update these eight-year-old figures.

Like a human, a horse needs certain nutrients. If a human's body is deficient in calcium or phosphorus, his bones will weaken.

"This is also true in the horse," emphasizes Dr. Schryver. "With an improper diet, a horse may be subject to lameness and arthritis."

The Cornell program has been created to help the horse owner keep his animal healthy. Using 19 horses and 21 Shetland ponies, experimentation dealing with calcium and phosphorus deficiencies is underway.

It has been known for some time that an excess of phosphorus in a horse's diet makes calcium less available to the animal, causing soft bones. The Equine Program hopes to establish a more precise calcium-phosphorus relationship by regulating the horse's nutrient intake.

In addition to the calcium-phosphorus experiments, trace minerals are also being studied. "Unfortunately," state Harold F. Hintz, nutritionist for the program, "our experiments with copper deficiencies were terminated in June when the barn burned." Had the copper experiment continued, the research would have established proper copper requirements.

Research will give horse owners information that will allow them to properly feed their animals to prevent disease before it occurs.

At present, results from the experiments are just beginning to become significant. In the future, nutritional data will be available which can lead to more intensive study of such ailments as arthritis, tendonitis, pulled ligaments, and fractures, so that, in the future, the horse owner will be able to prevent these conditions before they occur. Furthermore, the results of these experiments with horses may eventually extend the lives of humans as well.

Computing For Land Use

by NANCY KRUSE '70

A group of Cornell engineers have found a way to use the computer to store information about New York State's topography, and thus add another dimension to the information being gathered for a land use and natural resources inventory.

Professor Donald Belcher, director of Cornell's Center for Aerial Photographic Studies, said that the inventory study is being done by the Center under a contract with the New York State Office of Planning Coordination. That office proposed the project to the Center in January, 1967 as a result of a request from Governor Nelson A. Rockefeller for a natural resources inventory of New York State.

The basic source of information for this study is aerial photographs. The actual photographing was arranged by the state and was done in the spring of 1967 and '68.

Before taking any data off the photos, a listing and definition of the information to be obtained was necessary. This listing includes 50 land use categories and 65 items of point information, such as the number

of non-farm rural residents, or the number of miles of streams in the state.

The Center has 15 full-time college-trained aerial photo interpreters whose job is to visually transfer the information contained in the photos to a transparent overlay using a United States Geological Survey map as a base. Each parcel of land in a particular photo is located and its limits delineated on the map according to its present use, such as woodlot, cropland, or residential area.

An instrument called a stereoscope allows the photo interpreter to see the land in the picture in three dimensions. To supplement the information provided by the aerial photos, back-up data is obtained from cooperative extension agents, civil defense directors, highway superintendents, and health officials. These local people provide information which requires some

This picture and the one on the opposite page are typical of the aerial photos used at the Center.





personal judgment about facts which may not be readily apparent from the aerial photos. For example, an old farmhouse may be abandoned, or it may have been converted into a city dweller's summer home.

Once the maps are drawn, a follow-up study is made. This field checking consists of going into an area with the map in hand to make sure that the map accurately locates the features plotted on it.

After field checking, the maps are drawn in ink and readied for reproduction. The reproductions will be available to the general public for use in office and field work involving any kind of planned land use.

The mapping and categorizing of the land and natural resources of New York using aerial photography is the first research feature of the inventory study. The second step, as described by Ronald Shelton, research associate at the Center for Aerial Photographic Studies, will be "going beyond the map to the computer and quantitative analysis."

The first step in utilizing the computer's vast capacity for storing and analyzing information is to superimpose a grid system on the map drawn from the aerial photo. The grid size being used in this study is on a scale with a square kilometer. Each unit is called a cell and has a permanent geographical location and an identifying number. The constancy of the cell system is essential to the computerization of the information in the inventory.

Ernest Hardy, research associate with the Center, noted that since the study is designed to be repeated, without the permanent location of the cells such repetition would be impossible. Once mapped and put into the computer's grid system, the data on any cell can be changed and updated and the data will still apply to exactly the same parcel of land.

There are 140,000 of these cells covering New York State. For each of them, the computer may be storing as many as 200 items of information.

This stored information is then available for quantitative analysis which the computer prints out as a "visual interpretation of statistical information," Shelton explained.

The computer's visual interpretation print-out appears as a group of blocks of different tone values on computer paper. Each of these blocks represents a cell, and the tone of the block represents the cell's suitability for a particular purpose. This is obtained by programming into the computer a list of physical environmental factors important in choosing a site for a factory or a housing development.

Each factor is given a weighted value reflecting its importance in site selection. The print-out shows planners where to look for a site. The data stored in the computer will also give the planners a good picture of what they are looking at when they see the land represented by the cell. This procedure can be done for a small group of cells, such as a county, or for a group even as large as the whole state.

At present the land use and natural resources inventory is approximately half completed, with the Western, Central, and Catskill regions finished and the Hudson and Adirondack regions remaining to be completed.

When the project is completed, the Center for Aerial Photographic Studies will have added a great deal of knowledge about the land comprising New York State to the present store of information. It will also have provided an effective and meaningful way of utilizing this information for future land use planning.

Something New in Science Teaching

by DOROTHY KROTJE '72



A first-grade student studies the growth of bean seeds through the use of audio-tutorial programs. This method of individualized study allows the youngster to study without distractions of faster or slower learners around him.

Eight Ithaca elementary schools are among the 48 schools across the country involved in a research program for first and second graders that is aimed at finding new ways to teach science through practical instruction.

Cornell's Joseph D. Novak, Professor of Science Education, one of the leaders in this practical instruction research, refers to the concept as a "semi-programmed, highly specified input system."

The research is enabling educators to gather more correct data on concept formation in children.

The new method of teaching science in elementary school is a trial and error refinement of instruction controlled by the child himself. Individual students sit in booths in the classroom where they put on earphones and control the tape recorder and loop film.

Each programmed lesson is 15 minutes long, but it may be stopped or replayed whenever the child

needs more time or repeated instruction. Samples or illustrations related to the lesson are present in the booth.

For example, a lesson concerning plant growth may be accompanied by various plants in different stages of growth, seed pods, moistened seeds, and dry seeds. Like every programmed study, the lesson proceeds in many small and simple steps until the idea presented is complete.

This revolutionary mode of teaching science has instituted a new role for the elementary school teacher. Before each programmed lesson is used by the students, the teacher must listen and understand the program himself. He may wish to follow up the lesson with some class activity. After a lesson on plant growth, the teacher may have his students plant bean seeds, and then keep track of their day-to-day growth. The teacher may also follow the lesson with a group

Another student studies leaf structure and function with the aid of audio-tutorial programs. The classroom teacher is free to assist children who are not using the program.



The audio-tutorial program provides both teachers and students with a more exact knowledge of science. The most important advantage of the program is that it allows a student to learn at his own rate. He controls the equipment and reviews what he needs to review, unencumbered by the slower or faster learning of his fellow students. Such individual pacing is a definite aid to learning.

Results show that all of the one thousand children involved in the program are enthusiastic, and that all of the seventy or more teachers involved wish to continue the program. Often teachers use the program as a reward, saying that, "If you get all your homework done, then you can use the program."

Despite the many advantages of the audio-tutorial program, and the enthusiasm of the students involved, there are drawbacks. First, it is very difficult to design a programmed lesson, and one 15-minute lesson may require four or more months of work. And, though post-design operation is inexpensive, the cost of designing a lesson is very high, usually about \$2,000 for each 15-minute lesson.

Much of the research done by Novak involves the measurement of concept formation. This is very difficult because no one has defined or knowns exactly what concept formation is. Tests with pictures have been devised but the best evidence of concept for-

discussion, but all of the science training is supplied by the program.

Since he is free of the science training responsibility, the teacher is able to aid other members of his class, or he may, during the same time period as the science program, conduct a reading group.

There are many advantages to the audio-tutorial program. It is an effective method of teaching science to first and second grade children who have little reading ability. Also few elementary teachers have a sufficient knowledge of science, and teacher training is too expensive.

Facilitation of learning when presented with a new, yet related, task. No data is available on Novak's research, but some results show that children who go through the program can explain a lesson well as much as one year after the original learning. The amount of remembering through traditional rote learning is much less.

Naturally the first question that comes to mind concerning the audio-tutorial program concerns its applicability to other grade levels and other subjects. The audio-tutorial program is currently used in 400 colleges, although not at Cornell. And since teaching students from the pre-school to graduate level in a variety of subjects has proved effective, the future of audio-tutorial learning appears bright.

“A green isle in

An Island for Leisure

by GLENN AHRENS '70

This spring vacation, escape to Long Island!

How can Long Island, with its sprawling suburbs, perpetual traffic jams, and crowded beaches, even begin to compete with Florida as a spring vacation mecca?

The secret is to escape the crowds of New York and Jones Beach, and travel east. An early riser, traveling along the Montauk Highway away from the people-packed end of Long Island, can be out of the suburbs in less than two hours, with few traffic problems.

Eastern Long Island is a paradise, compared to the western part. There are miles of uncrowded beaches where the water is clean, and it is not necessary to battle for a place to put a beach blanket.

Small and medium sized towns dot the map, and one senses the historical character of these towns, which once lived on the fishing and whaling industry. The coastal towns such as Greenport, Sag Harbor, East Hampton, and Montauk are proud of their heritage, and try to preserve it.

For those interested in whaling, Sag Harbor, once a prominent port for the square-rigged whaling ships of the 19th century, offers an extremely interesting whaling museum. Elderly men and women, whose fathers and grandfathers were whalers, are willing

to talk at length about life in Sag Harbor during the big days of whaling. The museum gives the visitor some feeling for the days when ships would sail away for years at a time, and children would see their fathers for only short periods.

Lake Montauk, the eastern-most protected harbor on Long Island, is one of the most respected recreational fishing ports on the eastern seaboard. Scores of boats sail out of Montauk each morning to fish for cod, swordfish, bluefish, and even sharks. A visit to the docks at about 3:30 p.m., the time when the boats begin to return, is a unique experience. One can wander from pier to pier and gaze at the number and size of the fish that were caught that day.

Aside from sport fishing, many men still earn their living from catching lobsters and netting fish. The East Hampton Fishing Museum in Amagansett compares old and new commercial fishing methods. Much of the museum is devoted to the outmoded practice of offshore whaling: harpooning a whale from a 12-man boat that is launched after sighting the whale from a look-out tower.

These are only a few of the many intriguing places on Long Island. So why not escape the “hot town”, and spend this spring vacation on the “East End”?

THE “EAST END”

And Islands for Study

by TERRY RADER Grad

Most people call them the Isles of Shoals, but to those in Cornell's field marine biology program, the Isles of Shoals, ten miles off New Hampshire's coast, are not only as much a part of Cornell as the Ithaca campus, but also the locale of one of nature's most informative classrooms.

In 1964, Byron Saunders, director and professor of industrial engineering and operations research at Cornell, invited John M. Kingsbury, associate professor of botany and director of the program, to Star Island to speak at a conference there. Kingsbury, an authority on marine algae, was so popular, that the Star Island Corporation, which currently owns the major islands of the group, decided to equip a laboratory on Star and hire a naturalist during the summer for the benefit of all the summer visitors.

In 1965, Kingsbury returned with one of his classes on a field trip before the conferences began. The presence of the laboratory piqued the botanist's imagination.

He realized that with the surge in interest in oceanography and marine biology, there certainly was a need to expose promising college students to field work. In addition, the staff of the Star Island Corporation was present on the island several weeks before the conference began. The buildings were open, the kitchen was operating, and the power plant hummed as the staff made preparations for the summer programs.

The thought that tuition from students would help defray operating expenses during this "getting ready" period led to action. The action resulted in a unique two-week course.

Since the time is limited and the amount to be learned is practically unlimited, a typical day for the students is about 15 hours long. There are lectures by

members of the "resident" faculty and by guests, and field trips are scheduled to take advantage of the low tide. There are also motion picture and slide shows. Lab work takes up most of the evening hours, and when the power goes off at 11 p.m., the formal study day ends.

There are eight islands in the group at low tide, and unusually, nine at high tide. The unexpected increase is caused by the flooding at high tide of a strip of land that joins White Island and Seavey Island at low tide.

This year there were 105 applicants for the program, and, again, only enough accommodations for 30 students. Those selected to participate usually indicate that they wish to pursue careers in marine biology or oceanography, or have had no prior exposure to marine work and can show a need for this kind of training.

Kingsbury stated, "Only a small minority of those who applied were rejectable on adequate grounds. The final selections are made on a hunch and a prayer; most of the alternates are as well qualified as those chosen to attend.

Although space and time are limiting factors at present, Kingsbury sees a solution to these problems in the future.

In fact, the professor is trying to stimulate interest in establishing a permanent marine biology station on Appledore, one of the islands in the group. Should this become a reality, the program may expand to three four-week sessions each summer.

If Kingsbury's dream comes true, Cornell will be able to boast a campus surrounded by cod, visited by seals, and hosting a nesting population of snowy egrets.

THE MOOD IN WASHINGTON

by RICHARD COLE '72

We had been standing at the corner of 14th Street and Pennsylvania Avenue for four hours, and our toes were freezing in the biting cold of downtown Washington. As we waited for the parade, we remembered the morning's events.

It has been a strange morning. Surrounding what has been called the closest thing to a coronation that America has to offer, there was anything but a festive atmosphere. The city appeared under siege, or under the rule of a military junta. Policemen paced back and forth on every rooftop; secret servicemen and FBI agents, wearing conspicuous identification, circulated through the crowd taking still shots and motion pictures of the people. National Guardsmen were stationed every 20 feet on each side of the street, where they stood immobile throughout the day.

Members of the press were seen with ten or more passes around their necks. A ticket was required to see the inauguration itself, to sit in the stands along Pennsylvania Avenue, and even to cross the street.

The city itself seemed quite unexcited. One policeman stated that if he were off duty he wouldn't be near there, and many George Washington University students decided that studying for their final examinations was more important than seeing the inauguration. President Nixon's new home, a predominantly Negro city, had voted 90% for Hubert Humphrey, and most of that 90% simply stayed home. The young, black faces that did show up seemed skeptical.

Routinely patriotic mothers and their children waved small American flags, and we were handed a variety of right-wing literature, which called on President Nixon to rout "red Communists" and "fornicators" which were felt to threaten the existence of all that was sacred in America.

An hour before the parade, about 5,000 demonstrators had marched down a side street to the corner across from us. It was reported later that bottles were thrown and obscenities were shouted, but even though I saw nothing thrown, there was sporadic fighting and some arrests. The demonstrators appeared bone-weary in what would probably be their last fling in quite a while.

It had been a long election year for them, and

despite their efforts, Richard Nixon was about to be inaugurated; they seemed to sense the futility of their own presence.

While the President's speech was being broadcast in the streets, fighting again broke out, and the police called for reinforcements. Before they arrived, the speech was over and the Star-Spangled Banner sounded over the clashing figures of uniformed policemen and protestors.

The crowd's response to the inaugural speech was hardly overwhelming, and it seemed to many to be little more inspiring than his acceptance speech at the Republican convention. Now, during the national anthem, there was fighting in the streets, and the 82nd Airborne Division, trotting around and around in perfect formation, was called in to quell the disorder.

The parade itself, a lethargic procession of cars, floats, and military units, all led by the new President, was hardly interesting enough to hold its spectators. Some wandered away before the parade had passed completely.

No one seemed to have his heart in it, and the mood of the capital might well mirror the mood of the nation. The American affliction that President Nixon called a "malaise of the spirit" may, however, be a blessing in disguise. For the theme of the Nixon Administration might be "Quiet Down," and after the events of the summer (assassinations, urban riots, and of course, Chicago) much of the nation seems to seek repose.

The inauguration was somewhat dismal, but Richard Nixon seems to be the quiet, efficient man that benefitted from the noise and disorganization of the Johnson years. Even though his critics shudder at the deeds and statements of his past, he is relatively unencumbered by them, and prejudice would not be fair. Most of the residents of Washington, D.C. would have preferred to be cheering for another man: a Rockefeller, a McCarthy or possibly a Kennedy. Just the same, many dutifully lined Pennsylvania Avenue, cautiously hoping the best, not only for their new leader in the White House, but for their nation as well.

What People Think

ANOTHER VIEW OF BIAFRA

Miss Clare Garrett '70
c/o Cornell Countryman
Roberts Hall
Ithaca, New York
Dear Miss Garrett:

I have read with grave concern your article "Fight for Biafran Survival" in the January 1969 issue of the Cornell Countryman. No one quarrels with your legitimate freedom to sympathize with any suffering people, wherever they may be. However, you made some baseless and callous allegations against Nigeria and its people in your article, and I feel constrained to correct these notions in the interest of the readers of the Countryman.

First, let me dispel your accusation of immense human suffering and genocide against the Ibos in Nigeria. The population of Eastern Nigeria was 12.3 million according to the 1962 census. Out of these, 5.2 million belong to non-Ibo tribes and still constitute part of Nigeria.

If, according to your statistics, 25,000 Ibos die every day, the entire Ibo population of 7.1 million could be exterminated in 280 days, or less than ten months. Assuming that an average of 10,000 are dying every day, the entire Ibo population could be exterminated in less than twenty months. The fact that the Ibo population in Nigeria is still reckoned in millions, thousands of whom are living peacefully in nonwar areas, is strong testimony that your claim is false.

There is an International Observer Team at the war fronts in Nigeria drawn from Britain, Canada, Poland, and Sweden as well as representatives of the Organization of the African Unity and a personal representative of U Thant, the Secretary-General of the United Nations. Reports of these International Observers watching the conduct of Nigeria's civil war show that the allegation of genocide against the Ibo people is not true.

Mr. Ukpabi Asika, himself an Ibo man and formerly a lecturer in Political Science at the University of Ibadan, is a member of the Federal Executive Council. An Ibo man will not sit at the conference

table where genocide of his people is being planned.

The hunger in the war-affected parts of Nigeria is a wicked technique employed by Ojukwu's regime to score political advantage. Ojukwu refused to allow a land corridor for fast movement of relief supplies to his people. Nor will he allow day flights to the territory he still holds, except at night, thus cutting down by more than half the number of air flights that could carry relief supplies to the suffering masses.

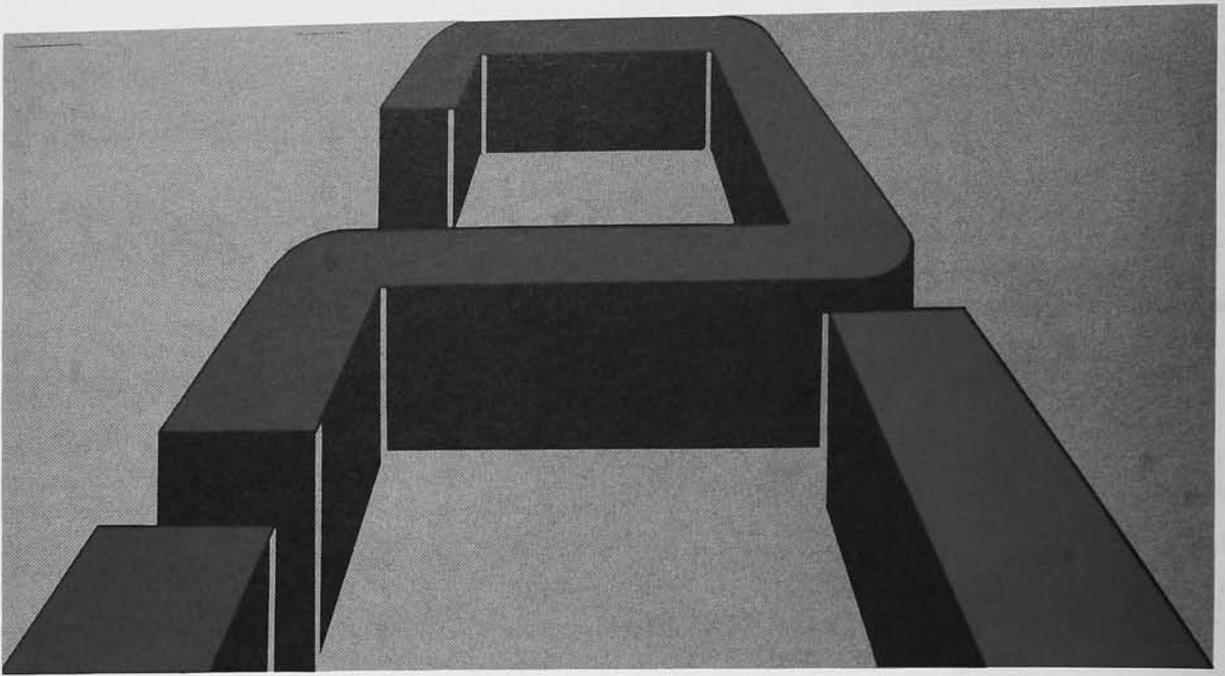
By limiting flights to night hours, the risk involved is increased severalfold. There is evidence to show that most of the relief supplies that got into the war-affected areas were distributed to Ojukwu's soldiers rather than to civilians.

Nigerians who have seen the film being circulated that depicts suffering in Eastern Nigeria know that only the minority groups in the east are suffering. We can identify these people by their tribal features.

Secondly, your assertion that the Ibos were the most educated in prewar Nigeria is untrue. I can produce statistics that show the true position of different regions in Nigeria before the war.

Your civil war in this country, one of the bitterest in history, was fought in order to unite your various peoples together, who were as culturally diverse as Nigerians are today. From such culturally diverse peoples has emerged a strong and united country. Nigeria seeks no less. However grave Nigeria's problem may be, right-thinking people all over the world know that secession is not the answer. Nigeria needs the Ibos, even more than the Ibos need Nigeria.

Joseph Ade. Alao
Department of Rural Sociology
Cornell University



Where is Agriculture Going?

Thursday, March 27, in Alice Statler Auditorium at Cornell this general theme will be covered by these speakers:

Morning Session:

10:00 a.m. Chairman: **Morton Adams**, *President, Curtice-Burns, Inc.*
Trustee, Cornell University

Welcome: **Charles E. Palm**, *Dean*
New York State College of Agriculture

“American Agriculture of the Future”

F. Thomas Huheey, *Editor, Farm Quarterly*

“Agriculture’s Expectations in Labor Relations”

Frank Fernbach, *Assistant to the President for Special Projects,*
United Steel Workers of America

Afternoon Session:

2:00 p.m. Chairman: **Joseph P. King**, *Administrator of the*
Genesee Valley Regional Authority

“The Impact of Resource Planning on Agriculture’s Future”

Ronald W. Pedersen, *Assistant Secretary to the*
Governor for Programs

“Agriculture’s Place in an Urban State”

Bernard F. Stanton, *Head*^o

“The Future of New York’s Dairy Industry”

Lowell C. Cunningham, *Professor, Farm Management*^o

Robert P. Story, *Professor, Marketing*^o

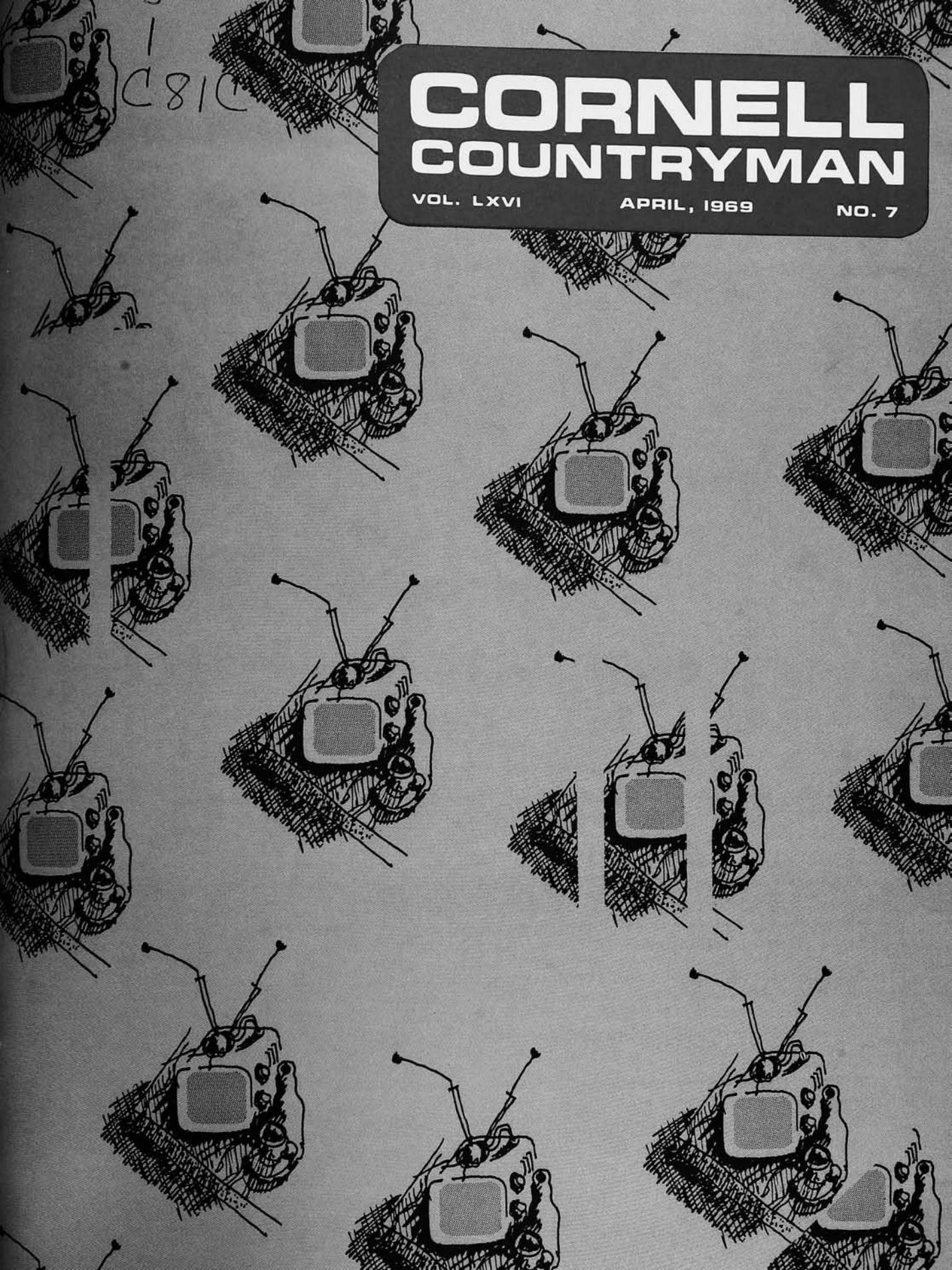
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New York State College of Agriculture

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APRIL, 1969

NO. 7



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PICTURE CREDITS

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COMMUNICATIONS AND THE FAMILY

Ninth Annual Institute of the New York State College
of Home Economics, a Statutory College of the State
University at Cornell University, Ithaca, N.Y.

Tuesday, April 29, 1969
Alice Statler Auditorium
9:30 a.m. to 3:30 p.m.

MORNING PROGRAM

- Mass Media and Family Relationships
Max Lerner
- Communicating to the Family
Francis X. Millor
- The Message through the Medium
Victor R. Stephen

AFTERNOON PROGRAM

- Communications and the Educational Challenge
To the Commercial Media
Lucy Jarvis
- To the Academic Institution
Steven Muller

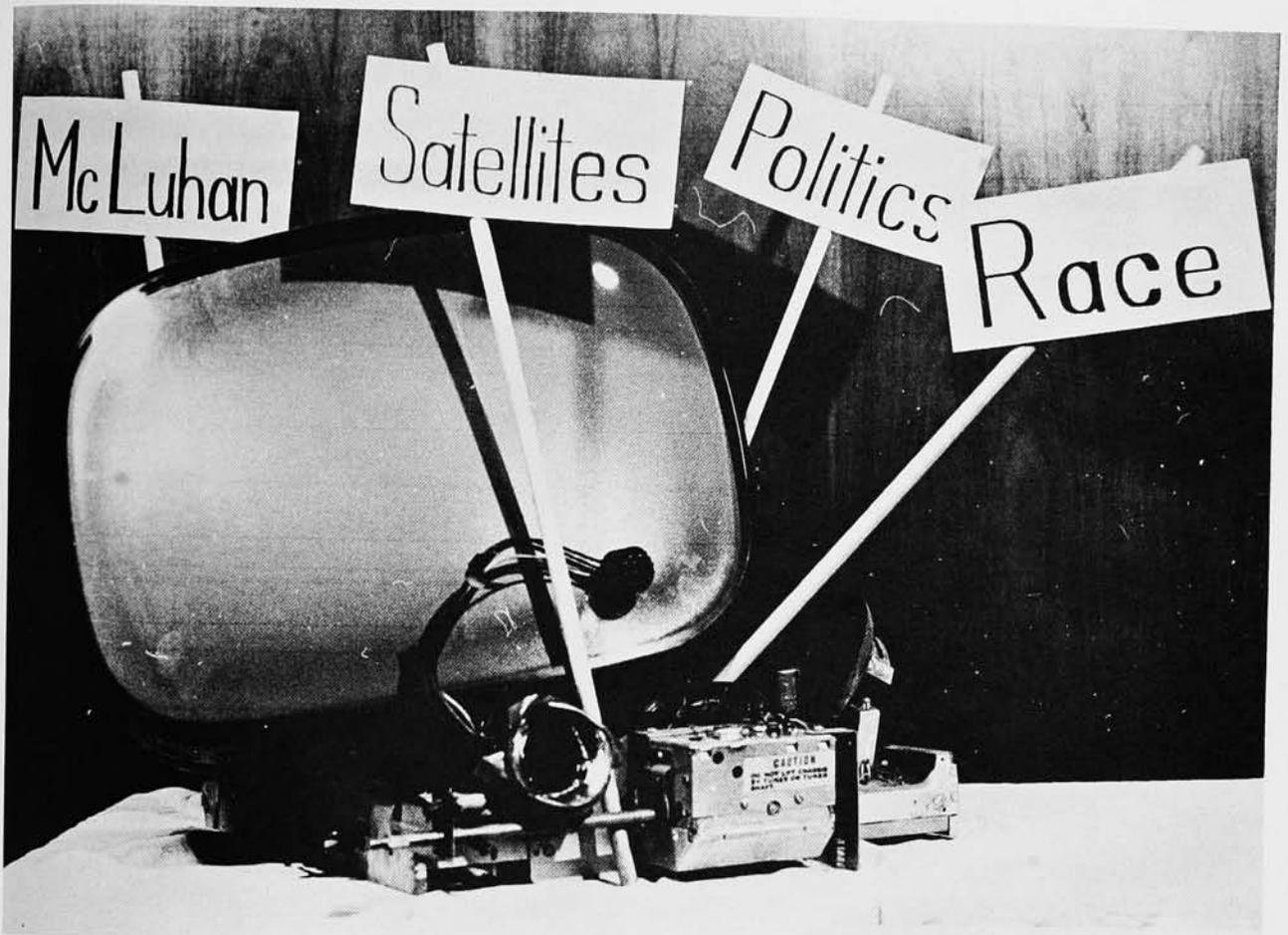
CORNELL COUNTRYMAN

APRIL 1969/VOL. LXVI — NUMBER 7

EDITORS-IN-CHIEF: Ira Lipsky '69 and Barbara Geitheim '69

EDITORIAL STAFF:—*seniors:* Michael Barclay, Barbara Geitheim, Ellen Grossman, Michael Hogan, Ira Lipsky, Gregory Pogson, Bob Potter, James Oliphant, Tamar Sherman, Jane Tutton, Sally Weisberg, Charles Wilson; *juniors:* Glenn Ahrens, Curt Barry, Rodger Beck, Donald Bowne, William Conine, Marya Dalrymple, Edward Fisher, Gary Fisher, Claire Garrett, Edward Hartman, Paul Kirchoffer, Nancy Kruse, Margaret Lou, Jeffrey Manfredi, Jeanne Massey, Martin Sennett, Suzanne Smith, David Stewart, Jerrold Trub; *sophomores:* Chris Ager, Michael Barrett, Joseph Bulsys, Michael Evans, John Henrehan, William MacKey, James McRae, Mary Ellen Merlino, William Overstreet, Jon Pennino, James Poggi, Dara Prisamt, Elizabeth Savage, Marcia Wities; *freshmen:* Jeffrey Abrams, Jay Barchas, Ella Berryhill, Richard Cole, Richard Gollance, Barbara Gray, Scott Hallabrin, Janice Johnson, Mark Klastorin, Dorothy Krotje, Margaret Levy, Robert Lynch, John Peterson, Iris Portny, William Schick, Peter Stalonas, Greg Sykes, James Wells, Kris Johnson.

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"This instrument can teach, it can illuminate; yes, and it can even inspire. But it can do so only to the extent that humans are determined to use it to those ends. Otherwise it is merely lights and wires in a box."

*Edward R. Murrow,
speaking about
Television.*

This issue of the Cornell Countryman concerns itself with the condition of segments of American Mass Media. Their current difficulties and future hopes are examined, and, as much as possible, explained. If anything is to be gotten out of these readings, it should be that man now holds a tool which can potentially reshape his society. What form of society the partnership of man and media will create is left to the reader to formulate.

WHO VOTES IN AMERICA

The mass media today are a major influence upon American politics. No candidate for public office escapes the eyes and ears of the American voter, and his every move may determine his stature. Politicians today are more cautious in their actions than in years past because they know that rash actions or words may jeopardize their future.

Unexpected Effects of the Media

However, the effect of the mass media is more than an overseer to keep politicians in line. Often, statements made by politicians which are recorded by the press can have a direct effect on the American political spectrum. For example, a statement made by Robert Kennedy stressing U.S. support for Israel was recorded in the press and received by a young man of Arabian background in California. The statement allegedly resulted in Kennedy's assassination by the young Arab in Los Angeles a few months later. With Kennedy's assassination, voter allegiance changed and the inadvertent result was the election of Richard Nixon.

Another politician whose words were adeptly recorded by the press and resulted in jeopardy to his career was Senator Abraham Ribicoff from Connecticut. At the Democratic Convention as rioting and violence prevailed in the streets, Ribicoff, who was on the podium nominating Senator McGovern, stared straight at Chicago's Mayor Daley and charged, "It's hard to face the truth." The statement, in reference to the fighting in the streets, cost Ribicoff dearly, as the conservative element in his home state watched and shifted their support from him. He was re-elected the following November, but barely.

Obviously, the American vote was affected by the coverage of the Democratic convention in Chicago. Without the scenes of violence and big party machinery intruding into the American living room, popular reaction to the subject would have been a great deal less. Former Vice-President Humphrey was even candid enough to admit that the scenes did hurt the Democratic cause, and his battle was going to be uphill. The coverage had an indelible effect upon the election of 1968, and will last for a long, long time.

Misquotes and Media Propaganda

The mass media, however candid and enlightening it is to the American and world population, cannot escape the misquotes and other blunders made by some of its members. Usually, as are all reports from the press, the initial effect is felt worse than all other moves to correct them. Often misquoted by a seemingly biased press, Barry Goldwater was depicted as a hawk in relation to the U.S. involvement in Viet Nam. In reference to a statement Goldwater made about the use of low energy nuclear weapons in order to destroy the jungle foliage the Viet Cong use as shelter, the press eventually snowballed this into making Goldwater "trigger happy" and not afraid to use "THE BOMB." Thus, the American public was led to believe that their choice lay between Johnson, the rational conservative, and Goldwater, the "trigger happy" liberal.

One cannot forget the propaganda used by the Democrats during the campaign, which pictured a little girl playing in a field suddenly being interrupted by the ominous mushroom cloud of "THE BOMB." "Who would

THE MEDIA OR THE PEOPLE?

By SCOTT HALLABRIN '72

you trust as President?" queried the morbid voice of the narrator. Goldwater eventually took the press to court on libel charges, but the initial result took its toll, as he received one of histories worst beatings in a Presidential election.

Another favorite target of the press is Vice-President Spiro T. Agnew. It is true that Agnew precipitated the attacks by his irrefragable statements concerning big city slums and nationalities. From there, editorials and straight reports began to lash at Agnew about his relative inexperience and lack of finesse in political matters. Public opinion naturally followed that of the media, and the Republican ticket lost ground until election day.

Money, Media, and Votes

Advanced press coverage has left still another effect upon American politics. Wanting to take advantage of such a far reaching campaign machine, politicians will naturally seek the use of the mass media for political slogans and messages in their favor. Keeping in line with the true capitalistic system, the mass media charge large sums of money for their use. This situation sets forth one obvious result; politicians, in order to get their start need to be rather wealthy to cover their campaign expenses. True, party machines provide money for seekers of important offices, but the newcomers must initially partly support their own campaigns. No longer does Abe Lincoln emerge from the back woods to become a great leader of men.

The 1960 West Virginia primary (Democratic) can be cited as an example. The two main aspirants, John Kennedy and Hubert Humphrey, more or less lacking in funds from the great Democratic political machine, had to tour that vital state using their own funds. The result was Kennedy, touring the state in his private airplane and saturating the media, landsliding past Humphrey who had to do his campaigning from a bus. While, it must be admitted that money was not Kennedy's sole attribute, there can exist no doubt that it certainly helped.

The main role of the press has always been to report the facts free from biased opinion. However, American freedom of the press makes that role a function of the individual writers. Writers of the mass media influence several factors of our society through opinionating their reports to the public. Politics is only one factor of several. As things now stand, politics is being swayed by a society who is letting the mass media think for it. The mass media should either realistically recognize the power they hold, or perhaps suffer restraints, in order to maintain political fairness in the United States.

The Man



Are we all searching for our identity?

By RODGER BECK '70

With the publication of his first book, *The Mechanical Bride*, in 1951, Marshall McLuhan has been on the road to becoming a hot commodity.

His deep analysis of mass media's effect on society has won the acclaim, and the disclaim, of many. Herein lies the crux of McLuhan's popularity-controversy.

He has written a number of articles and essays, but it is his books which cause the largest stir. *The Mechanical Bride* analyzes both social and mental pressures created by the press, advertising, radio, and movies, on the average consumer. *Understanding Media*, 1964, is an attempt to purvey his theories concerning the whys and wherefores of media.

McLuhan, or if you will McLuhanism, has become synonymous with the word media.

In McLuhan's opinion, only three technological advances in the history of man have effected the media: the phonetic alphabet, which enhanced man's visual power, movable type, which gave man a means of expression and dissemination of ideas, and finally the telegraph, which in his estimation will bring man full circle back to the primitive state he occupied before the phonetic alphabet existed.

McLuhan believes all forms of media to be an extension of man himself. Therefore the media have the power to change man's perception of the world around him, which in turn influences his association with the world. McLuhan further believes that this change reshapes man's associations or, if you will, the society which originally brought about the change.

The changes he refers to here are the technological advances such as the phonetic alphabet, movable type, and the telegraph.

McLuhan contends, that the adoption by man's evolving society of the first two above mentioned advances, spurred the entire process of individualization, leaving man more independent of his society for such things as the learning process and idea formation.

However, with the advent of electronic media (the telegraph) the individualizing process tends to reverse. This is accomplished by unconsciously giving back to man his former view or perception of the world. The individual is no longer as important as he used to be, because the society in which he lives divests itself of all personal contact, and forces the individual into a search for his lost identity. The resulting identity search may take many forms ranging from violence to complete withdrawal from the society.

With the Message . . .

MARSHALL McLUHAN

McLuhan feels that this is the primary reason for so much violence and discontent in the United States today. People become caught in the whirlwind of technological advances such as television, and lash out to try and find their former selves.

McLuhan's definition of media is all-encompassing. He reasons that media includes anything that is an extension of man, from the lawn mower he uses on Saturday afternoon to the computer which issues his income tax refund. According to McLuhan, the average person can hardly avoid media.

The electronic media are McLuhan's primary concern. He has gone to great lengths to prove that the medium is the message, rather than the content of the medium being the message.

For example, in his estimation television is not a medium aimed at sight. On the contrary, it is a medium aimed at the sense of touch.

McLuhan reasons that the visual image projected by TV is of low definition or intensity. The image gives no depth analysis of itself, and therefore the viewer must fill in this void with his own interpretation of what the image means or should mean to him, with a resulting tactile image being formed. A medium such as this, with low definition and much required interpretation, McLuhan terms a cool experience. TV, then, would be a cool medium.

Radio is just the opposite. The listener hears what is being said, and has to do very little interpretation of the medium itself, even though what is being said may require considerable scrutiny.

By the same reasoning a photograph is a high intensity or hot medium. The telephone is cool, and a lecture is hot.

McLuhan feels this new birth of electronic media, especially TV, to be of vital educational significance. He believes television to be the one technological advance that has most deeply affected growing children, even before they become school age. He feels that putting a child into a classroom full of books and blackboards is an absolute waste, and is actually a detriment to academic development, since the child has become so

reliant upon television to bring him an image and stimulate his mind in a subconscious manner.

Also, McLuhan sees television as having far reaching effects on politics. This first came starkly to light with the Kennedy-Nixon debates of 1960.

McLuhan feels Nixon's failure was due to the fact that he was hot, of high definition, and required seemingly little interpretive analysis. The public became apathetic to him. Kennedy, on the other hand, possessed that cool charisma which people sought and identified with as an answer to such questions as Viet Nam, Berlin, and Cuba.

Nixon, says McLuhan, completely reversed that image in 1968. He became more sincere, rid himself of his aggressiveness, and buried his "Tricky Dick" image. In 1968 it was Humphrey who was hot, struggling and clutching for every vote as though his life depended on it. People simply dislike hot candidates.

What does McLuhan see in the future as far as media and its impact on man is concerned?

First, McLuhan sees the electoral process as we now know it as being an antiquated expression of the people. He views the electoral ballot as an object of high definition in a low definition country. He feels that with the aid of TV, daily votes will become the thing of the future. Hundreds of political facts will be presented to an audience of millions and they will, in turn, voice their opinions on these individual facts.

Cybernetics is McLuhan's overall answer for the world of tomorrow. He contends that the behaviors of entire societies can be programmed into computers, thus allowing the best possible alternatives to be followed—best for the society in which the individual lives. This, he thinks will extend human awareness to its upper most limits and allow societies to function more efficiently than they do now.

There is no doubt that McLuhan is controversial. Some people view him as a sinner, others as the savior of a media-centered world bent on its own destruction, on a lemming-like migration in search of identity. In either case, Marshall McLuhan symbolizes the dynamism and daring of mass media in the twentieth century.

Notebook in hand, I trudged down Libe Slope to Noyes Center for my first T-group session. I was the first one to arrive and I seated myself in the empty room. People drifted in, greeting each other warmly, kissing and shaking hands.

I asked the group if it would be all right for me to sit in on the session, and they welcomed me on the condition that I participate. We sat down on the floor in a communal circle. Since this was their first meeting the session began slowly and rather awkwardly.

This T-group differed from most in that it didn't have a leader. It was composed of people who had experienced T-groups before and most of them would have been competent to lead the group.

Although everyone denied any claim on the leadership, unconscious vying for authority manifested themselves during the organizational part of the meeting. This aggressive behavior in some of the members provided the material on which was based much of the "feedback" comments.

The first person to be singled out was a slim blond girl whose frequent and well-articulated opinions stood out as highlights in the group. She was finally criticized by a boy who described her as a "self-acclaimed child prodigy of T-grouping." Defending herself, she said that she had merely wanted to stimulate the group; but the group agreed that, despite her positive intentions, she was affecting them negatively. The girl agreed that

she was at fault and said she would "work on it" and asked everyone to "call her on it" if she repeated this behavior.

By midnight the circle was drawing in towards the center. A tense quiet descended over the room and then one boy who had been rather quiet all evening spoke up, saying that he felt "up-tight." He said the aggressive behavior of a boy sitting near me made him feel this way. The criticized person demanded to know specific instances in which he had offended the group, and the other boy said that this challenge "turned him off" and prevented further comment. He turned to the group asking for support.

I felt myself breathing more rapidly, my face becoming hot. For two years I had known this boy who was now the center of attention, and although I liked him, I also reacted negatively to his dominance. I wanted to give my friend helpful feedback but I also felt the restraint of maintaining the dishonest politeness that I had been hiding behind for so long.

Finally, the open atmosphere of the T-group removed my inhibitions and let me speak my long-hidden feelings and criticisms. My friend could sense the difficulty I had criticizing him. To show me that he would not be angry he reached out to hold my hand.

My experience was not unique as far as T-groups go but it was unique for someone like me who had learned to accept the cold expediency to which interpersonal communication has degenerated in our society.

Today, people generally have only enough time for honest communication with their immediate family and a few close friends. They become dependent on mass media for outside communication; most of their capacity for good interpersonal communication is never developed.

Sensitivity Training traces its origins to a brotherhood week conference in 1947. A group of psychiatrists and psychologists were discussing one of their members when this person walked in. As an experiment, one of them continued discussing her although she was listening and soon she protested that she had been entirely misunderstood. A candid discussion followed in which the group's perception of her was compared with the perception she had of herself, resulting in greater understanding among everyone.

Since then, interpersonal communication has become known in the academic world as the area of Applied Behavioral Sciences. The labs—sometimes called T-groups (for training), or Sensitivity Training groups, or Encounter groups—were developed 21 years ago at the National Training Labs, part of the National Education Association. Aside from the famous training labs such as NTL's center in Bethel, Maine, and Esalen Institute in California, there are informal T-groups on almost every college campus.

Turn Off The Tube And Turn On To People

By **CLAIRE GARRETT** '70

The object of T-grouping is to create a more honest atmosphere where individuals will be free to examine themselves and each other. This sensitivity training is intended to enrich peoples' lives and is in no way intended to serve as a substitute psychiatrist for unstable people.

It is very difficult to describe a typical sensitivity training group because they all vary according to the number of people involved, the leader, their democratically chosen goals, the environment, and the duration of the training. Esalen and NTL labs offer weekend, weeklong, two weeklong and nine-month courses of concentrated training, whereas Cornell's groups generally meet once a week with periodic weekend "marathons."

Some groups are much more physical than the one I attended. These are referred to as the "encounter" groups. They frequently make use of "nonverbals" to express feelings, such as slapping to indicate anger, kissing and hugging to indicate affection. When dialogue is inadequate at expressing the feeling, the group often calls for a nonverbal encounter between conflicting parties. Esalen Institute also tries to teach their participants not to be ashamed of their bodies and that physical expressions need not be interpreted as sexual. Esalen therefore has coed health baths and encourages nude T-groups.

T-groups at Cornell are led by volunteers and hence are free. But Esalen, for instance, with the magnificent Big Sur coastline, health springs and famous psychologists for leaders, commands a high price. Rates there and at Bethel are about \$35.00 per day.

Aside from its value to the individual, sensitivity training has proven its merit to business and industry. Realizing that their employees must not only be competent but must cooperate with each other for maximum productivity, companies are beginning to send their employees away for expensive company-paid sensitivity sessions. Freed from the fear of possible demotion, employees share enlightening perceptions about superiors in the T-group. They participate in special exercises designed to simulate their business environment. They are teamed up to solve problems and then asked to analyse the forces at work in the group such as personality conflicts and competition. Towards the end of these sessions, groups are switched and new problems assigned so they can try out their new-found skills with a different group and be better prepared to adjust to the group to which they will return.

Public schools are beginning to realize the importance of beginning sensitivity training at an early age. The Wheatley School, Mineola, L.I., became the first public school to offer such a program. Recently the Ford Foundation's Fund for the Advancement of Education granted the Esalen Institute \$21,000 to train five public school teachers who were then to return and experiment

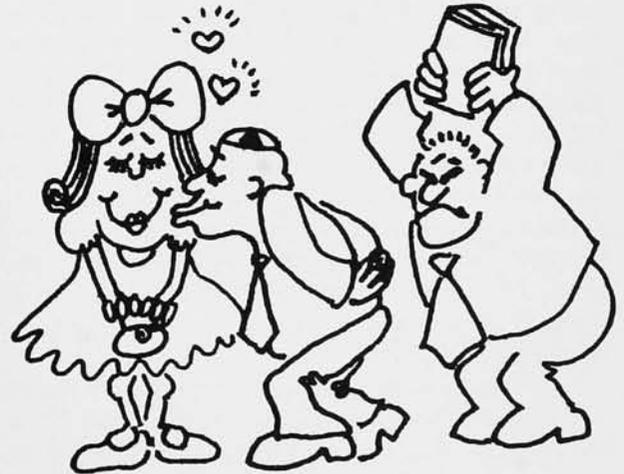
with T-groups in their classrooms.

Here at Cornell, sensitivity training was used last fall in the orientation of boys' Dorm Counselors. According to Dorm Counselor J.T. Wecker '69, the two intensive days of training helped them deal with their own problems, both personal and group-related, so that they were more free to cope with the problems of their freshmen.

State Department officials, clergymen, and housewives are among the many other different persons who are becoming "turned on to people" through sensitivity training.

People who have never had sensitivity training however, sometimes find it difficult to adjust to the higher degree of openness exhibited by their T-grouping friends. Although it is impossible to have the same kind of relationship with them as one had with the T-group, all of the T-group experience is not wasted. One has learned a great deal about himself, what effect he has on people, and is thus better equipped to communicate more precisely with people and be understood by them.

Interpersonal communication has been much neglected because of the accent on mass communication. Sensitivity training however, applied not only for personal enrichment but for greater understanding between such confrontation groups as government and minority groups, and students and faculty, can restore the balance between these two forms of communication and bring our society closer together.



Often a T-group will make a person more aware of what he wants to do.

The Domestic Satellite Controversy

Communication satellites are causing discussion in many circles. At present, both the Federal Communications Commission and Congress are wrestling with the problem of educational television satellites. They must decide between plans for satellite systems offered by the Ford Foundation, the Carnegie Commission on Educational Television (ETV), and Comsat, developer of the Early Bird satellite.

The Ford Foundation program, developed by Foundation president McGeorge Bundy and Fred Friendly, former president of CBS News, was the first program entered with the FCC for discussion. The proposed Broadcaster's Non-Profit Satellite Service (BNS) is an attempt to provide the financial support for national educational television system from the revenues of a communications satellite system.

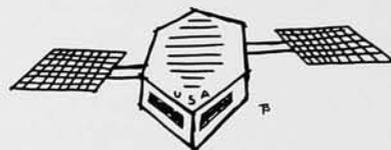
The plan proposes two systems that might fulfill the financial expectations. BNS-1, the smaller system, provides a surprising area of broadcasting range. It consists of four satellites, orbiting at 22,300 miles, stationary over each continental time zone, with the possibility of a fifth satellite to serve Alaska and Hawaii.

This system would provide six channels in each time zone for commercial channels, and five channels in each zone for non-commercial television, for a total of 44 channels. Ford proposes that the non-commercial channels be separated, with one channel solely for cultural and informational programs directed at the mass audience, three channels allocated to primary and secondary education programs, and one channel limited to university level instruction. BNS-2, the more complex system, would have six satellites, carrying a total of sixteen channels in each time zone, and a total of 64 channels nationwide.

Ford lists a variety of services which it feels the BNS will provide. The news services would include full and live coverage of significant hearings and debates. Editorial content and interviews with leaders in many fields would be possible. Musical, dramatic and literary events could be presented during prime time, as well as series devoted to other cultural developments.

The benefits of this system are great. Viewers would have a wide choice of programs. While commercial television networks would provide mass entertainment, there

would be a "second force" of cultural events, information, interpretation, and community service programs available. Mr. Friendly has stated that, "the commercial networks have the ability to do anything that needs to be done, but they don't have the time. Informational stations have the time, but they don't have the money or the resources." The Ford Foundation hopes the commercial networks will cooperate to aid Educational TV.



The three commercial networks are in favor of the Ford proposal. By using the satellite transmitters, they could cut their present land-line transmission costs by some \$15 million annually. Hopefully, the fees commercial stations would pay for use of the satellites would cover the cost of the system.

However, there is some opposition to the Ford plan. The National Education Association has expressed concern that any distribution system that centralizes ETV might cause "monopolistic tendencies." Ford has also sensed this problem, asking the FCC to consider the report of the Carnegie Commission on Educational TV.

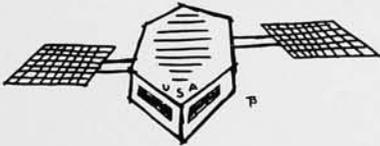


Public television as conceived by the Carnegie Commission would strengthen local and regional services. It would provide only occasionally for live, interconnected hookups of ETV, avoiding a fourth national network. Unfortunately, the Carnegie Commission plan, while promoting local autonomy, does not provide transmission facilities as proposed by the Ford Foundation. Ford contends that as long as a satellite system is to be developed (as it surely will be) ETV should benefit from the service, providing variety and quality to the national audience.



By JON PENNINO '71

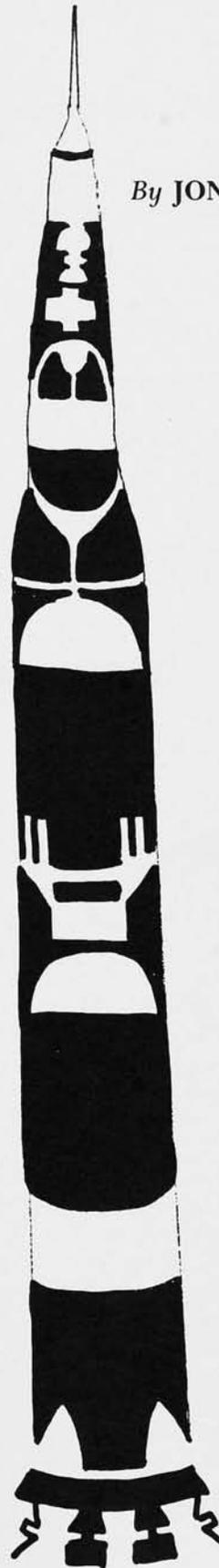
The real competition for the Ford Foundation comes not from the Carnegie Commission, but from Comsat. Arguing that it alone possesses sole rights to operate communications satellites by virtue of the Communication Satellite Act of 1962, Comsat presented the FCC with its own development plan. Scheduled to become operational in 1970, Comsat plans a more complicated and sophisticated system than the Ford Foundation's. The system will provide television signals on sixteen full-time channels, telephone and teletype transmission, as well as voice and data processing channels.



America Telephone and Telegraph is also opposed to the Ford suggestion. AT&T owns 25% of Comsat and the land-line facilities that now carry network programs. AT&T argues that any system separating broadcast and other communication channels into different satellite systems, (as the Ford proposal does) would create complex interference problems. AT&T is asking the FCC to license it as the sole operator of all domestic receiving stations.



The FCC has not made its final decision; with intense feelings and interests on both sides of the issue, there is the possibility that the FCC will not make one at all. It is quite probable that Congress will undertake to settle the dispute. Perhaps a compromise package of the Carnegie Commission and the Ford foundation proposals is the solution. Whatever the result, it is hoped that when the satellites take off, Educational Television will not be left behind.



THE RADIO

REVOLUTION

By GARY FISHER '70

Radio Station WBNX in New York is searching for a Cuban disc jockey. All applicants should, of course, be thoroughly familiar with home-town life in the sugar fields of Cuba. They should be able to excitingly introduce the top Latin American tunes of the day with plenty of "aye banditos" and "ave marias," be able to react to news of the Castro regime with "good old fashioned bloody Spanish," be capable of chatting pleasantly about the time and temperature, and be able to quote Latin American revolutionaries fluently. The audience appeal of such a program will understandably be extremely limited and yet it is precisely this type of specialization in radio programming that is causing the commercial resurgence of modern-day radio.

At this very moment, there are more radios in the United States than there are people. The figure, as of the February 1969 government statistics, is now some 263,000,000 sets. The number of radio stations is on the upswing as well, with over 6300 commercial concerns broadcasting on a regular basis. An even more impressive finding—one that would undoubtedly render Marshall McLuhan a bit uneasy—has come from a recent survey conducted by the A. C. Nielson Corporation for the Columbia Broadcasting System. More Americans now listen to radio during the course of a normal week than watch television during the same period. Figures

of the CBS survey show that 90.7% of the nation's people "listen actively" to one or more radio stations every week while 87.9% of the nation's population watch TV every week. Of course, these figures refer to the national average audiences only. They indicate, however, the impact of modern day "specialized" radio.

It seems that radio broadcasters throughout the nation have suddenly realized that the number one mass medium for the dissemination of information and mass entertainment is indeed the medium of television. They have recently begun to gain back their former audience in piecemeal fashion by directing specific appeals to certain segments of the listening public.

Movements away from the strict "Top 40" format became evident in the early 1960's as stations experimented with novel programming and, in so doing, attracted distinct slices of the public as their own loyal listening audiences. A sizeable number of stations started billing themselves as "good music" stations and featured anything from classics and semi-classics to show tunes and standards. Other broadcasters directed their programming toward country and western, or folk music, thereby attracting rural and farm audiences. Such rural radio stations offer considerable agricultural and economic news in efforts to better serve their particular publics. A great number of radio stations have directed their at-

Moving Toward Specialization—

A NEW BROADCASTING CONCEPT—

STRONGER APPEAL TO SMALLER AUDIENCES

tentions toward the interests of black people through the programming of soul and rhythm-and-blues music (with vibrant yelling “soul brothers” as disc jockeys) and the dissemination of news about riots, rallies, and incidents of discrimination.

Several other stations in New York State alone have turned to “all news” or “all sports” formats. Numerous broadcasters across the country have subscribed to “all talk” programming. There is even a radio station in the Los Angeles area that dedicates itself exclusively to classified advertising!

This transition continues today more than ever. Radio programming directed to specific distinct segments of the population is the rule rather than the exception and every month at least three or four stations announce they are dropping their old programming in preference for what has been dubbed “continuous programming” format. More and more stations are beginning to take on the characteristics of one 24 hour program narrowly addressed to some small fraction of the public. In New York City, for example, some 65 AM and FM stations compete for listeners. Virtually all tastes are suited in the nation’s top radio market and, understandably, the pressures of competition and advertising have pushed the “Radio Revolution” to specific stages heretofore unknown. The city has no fewer than eight stations treating popular music in separately distinct ways. New York also boasts two all-news operations, three Negro-oriented stations, one listener-owned Pacific outlet, one Country-

Western broadcaster, five Spanish-broadcasting operations, two all-talk stations, and even one station (WNCN-FM) that directs its programming exclusively to professional physicians!

Will the “Radio Revolution” stand the test of time? Shall economic pressures continue to force the specialization of radio-formatting to continue? Is such a fractionalization of the listening populace advantageous?

The *New York Times* recently quoted *Time Buye*, a broadcasting trade journal, as stating, “Everyone from career girls to bird watchers to travelling salesmen could well be the special province of radio stations in the future.” Such speculation is hardly idle as KADS Los Angeles, devoting itself exclusively to the broadcasting of classified advertisements, and KIGH, Portland, dedicating itself to the monitoring of the nation’s stock exchanges, prove.

Radio, then, is now in the process of going through the same evolution that our newspapers and magazines have gone through previously. Experts feel, incidentally, that television will be the next mass medium to specialize on a full-scale. Such a fractionalization on the part of the visual medium could benefit the United States greatly; it could render TV the most vital regulatory and stimulatory force we would know of in our cities. The fact remains, however, that the “Radio Revolution” is upon us. Radio, in catering to the particular interests of small groups, is indeed a mass medium on the move.

ATTITUDES

TELEVISION

AND

RACISM

By IRA LIPSKY '69

The formation of each person's attitudes and beliefs is a highly malleable process. What we believe in, is directly dependent on that to which we have been exposed. If a child is raised in a relatively isolated community, it is likely that the dominant attitudes of that community will become his attitudes. If a child is raised in a city, where he will be exposed to many variant attitudes, he will probably adopt those of the group in which he has settled. Over both of these examples rides the extensive effect of one's parents, whose attitudes and beliefs are presented to the child from the moment he is born. Either of the above situations can lead to a wonderful system of mutual reinforcement whereby what the child believes in, his parents and friends believe in.

Unfortunately this happy system was partially shredded by the advent of television; a device which could give one point of view to twenty million people. Television made everything easier for one's imagination. Unlike radio, television gave the viewer a picture. With little conscious effort, the sweep of the cathode ray took on the movement of a hypnotist's gold watch. As one sat in front of his T.V. set, it became simple for him to leave his living room, and be walking alongside Matt Dillon through the center of Dodge City.

It required a few years for the television industry to appreciate the power that it had. In its grasp was a mechanism which could affect the thoughts of millions.

This writer, who belonged to the first generation of "television babies," cannot remember seeing a Negro on television before 1960. I certainly knew Negroes existed, but they weren't television people. There were never any Negro cowboys, or detectives, or cartoons. Everything was pure white. No one's childhood heroes were Negroes: from Superman to Roy Rogers, they were all as white as the Lone Ranger's horse. The fantasy world which television wove for me and millions of other children simply did not include Negroes. Whether television realized it or not, it had for years been broadcasting not-so-subtle propaganda to America. White was normal, black was not. White was in place, black was out.

If it is shocking to think how those television practices affected white children, it is almost unfathomable to imagine what it did to black children.

Negroes eventually found their way on to T.V. screens in the early 1960's. It was not easy for them to receive large scale national coverage. To get it, they had to burn down a few city blocks and riot for a few days. The screen became full of Negroes—Negroes fighting with police, Negroes looting stores, and Negroes throwing fire bombs.

I cannot in all honesty castigate television for covering the riot, for riots were news, and one of television's major jobs is reporting the news. But one thing which television should have done immediately was ask WHY? Why did the riots happen?

Within the past year, television has produced in-depth documentaries on this question. But this is only a start.

Since the early 60's Negroes have appeared on T.V. screens with increasing frequency. But the tokenism is obvious. A Negro who is thrown into a program or commercial merely to give it supposed racial balance stands out as if he were dressed in neon. The only Negro who gives this writer the impression that he is a true part of his program is Bill Cosby, co-star of I-Spy. The reason for this is principally that Cosby is shown as a thinking, feeling, humorous, intelligent human being.

The foremost task before television today, is to make the Negro known to America. Through carefully prepared programs, T.V. can clear up the mystery which surrounds the Negro, educating white society to the racial facts of life. While this is being done to adult viewers, a concerted effort must be made to reach Negro children. Children's shows should be desegregated.

Television has the potential to be the single greatest tool to alleviate the racial crisis. It can instill new ideas and weaken old, mistaken beliefs. It can bring about a mutual respect between the races. This respect is the only hope for racial peace in this country.

The College of Agriculture Fund: Dollars For Education

By MIKE HOGAN '69

The door to a new era and conception of fund-raising for the College of Agriculture is open. Joseph P. King '36, chairman of the Advisory Council for the New York State College of Agriculture and the Agricultural Experiment Stations, is chairman of a new fund which will approach new avenues for acquiring and utilizing money for the College.

King, active for many years in alumni activities, explained in a recent *Countryman* interview that the Alumni Association of the College has recognized the need for such a fund for many years.

"Since at least 1964 the Alumni Association has sought ways to expand the scholarship assistance we give students," he explained. "Gradually, as we became aware of the need for funds in other areas, we approached the concept of an undertaking geared to many problems."

Although the initial impetus for the drive could have begun as early as 1966, it was delayed so as not to compete with the University's Centennial Campaign. According to King, the timing and concept of the fund are intended to compliment and balance University fund-raising activities, in particular the monumental Second Century program. The Second Century program, geared to future as well as current educational needs, is based on the creation of "interest, awareness and involvement" with the University.

King said the College of Agriculture Fund will have a similar encompassing function, calling it "very compatible" with the Second Century drive.

"Although the first emphasis will be to generate funds for student financial aid, there are many other important areas of need," he explained. "For instance, the deans of the College have long desired a discretionary fund which could be applied for various programs as the need arises. We should have a fund big enough and flexible enough to accomplish a wide range of functions."

One group who will receive increased support from the program is transfer students. Herbert L. Everett, director of Resident Instruction, explained that the College admits a large number of qualified transfer students from the two-year community and "Ag and Tech" colleges in New York. King emphasized that these students, presently without much formal support from the College, deserved assistance because of their proven ability and superior records. He also said he saw a need for more financial aid available to all students in the College, citing the general rise in the cost of education.

The first meeting of an "ad hoc" committee to move toward the College of Agriculture Fund was in August of 1968 under King's leadership. He explained that the



Joseph P. King '36

Chairman of the College of Agriculture Fund

group, stimulated by favorable response from the University, the College Advisory Board and alumni, had been meeting since August to draw up guidelines for the fund. The formal kickoff of the movement took place at the annual meeting of the Alumni Association on March 27.

King's wide background in fund-raising for the University has left him with definite ideas about the direction the College of Agriculture fund should take. He said improved communication between administration, alumni and the private sectors was a vital part of the movement.

"Establishment of a long-term fund involves much more than a flow of money," he explained. "We are aiming at a project that will pull together many of the forces now at work, coordinating them for results both immediate and in the future. This is why effective communication is so important."

Trends in support of education indicate that a broad base of acceptance is necessary, King continued.

"Generally, we are moving both toward increased private support of public education and increased private aid to public units," he predicted. "At the same time, we're maintaining present trends. Of course, this is a healthy development. Modern education should have the broadest possible base of support. This is the direction we're aiming in."

King has been endorsed by the Committee on Alumni Trustee nominations to be a candidate for the University Board of Trustees, and should prove a valuable asset to the College of Agriculture Fund. Its success will ensure the College of an important role in the future.

NEW YORK STATE COLLEGE OF AGRICULTURE
A UNIT OF THE STATE UNIVERSITY OF NEW YORK
CORNELL UNIVERSITY
ITHACA, NEW YORK

CHARLES E. PALM
DEAN

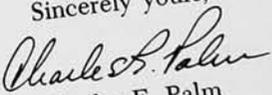
Dear Friends:

This issue of the Cornell COUNTRYMAN is being sent to some 15,000 alumni of the College of Agriculture living in the United States. We are doing this for two reasons: to reacquaint you with this excellent student-produced magazine and to let you know how much your support means to us. Particularly appropriate is the theme of this issue—Communication, which is essential in keeping you informed on activities at the College and in bringing us your thoughtful advice.

The College of Agriculture Alumni Association has 1,300 members, many of whom are actively engaged in various College-related efforts including recruitment of students for the College and serving on advisory committees. All members of the association receive the COUNTRYMAN each month, as well as other specialized information from time-to-time. We plan to increase these communications. If you are not a member of this association, I invite you to join by clipping the coupon at the bottom of this page, filling it out, and sending it with your dues to Professor Stanley W. Warren, treasurer of the Alumni Association.

I call your special attention to the article announcing the College of Agriculture Fund. Many of our alumni will contribute to this important development, not only with monetary gifts but also through personal involvement in the affairs of the College and the University. Joe King, general chairman of the fund, typifies alumni who willingly devote time and talents in support of their Alma Mater. One goal of the fund and of the University's Second Century Program is to develop more of this type of leadership. I am personally convinced that this must happen and that, through working together in the years ahead, it will happen.

Sincerely yours,


Charles E. Palm
Dean

Clip, fill in, and mail with \$2 dues to S.W. Warren, Treasurer, Warren Hall, Cornell University, Ithaca, N.Y. 14850

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CORNELL COUNTRYMAN

VOL. LXVI

MAY, 1969

NO. 8



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ON THE COVER

Education is no more enclosed by walls than beauty is by season. The transient warmth of Spring at Cornell draws classes to the quads and gorges.

CORNELL COUNTRYMAN

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COUNTRYMAN EDITORIAL

“Where is the Countryman going?”

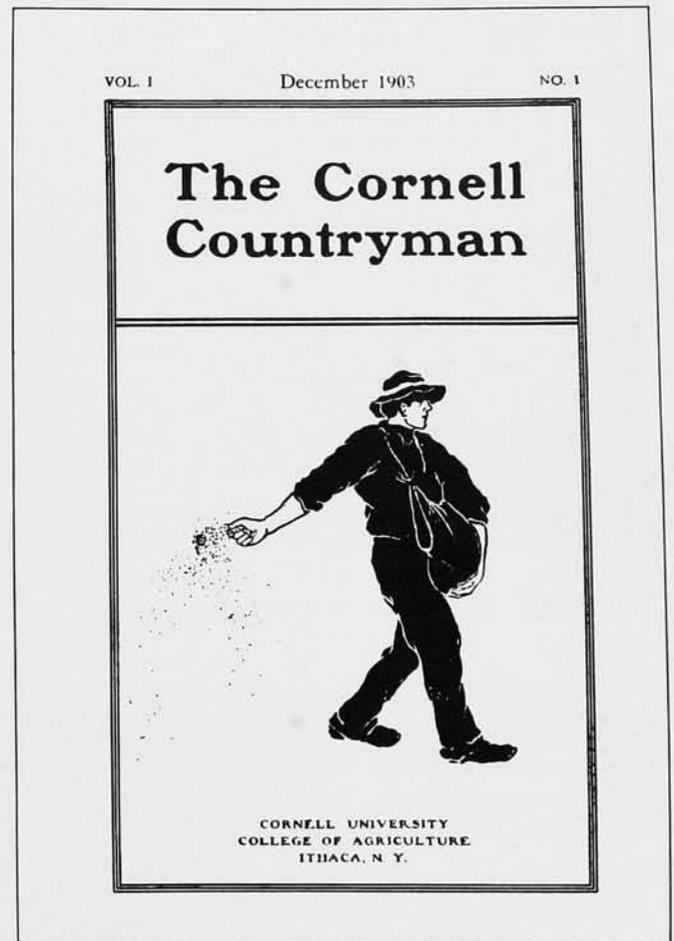
The question is asked by faculty, alumni and students, perhaps for different reasons. It is a valid question, for the Countryman is an official publication of the College of Agriculture. It should reflect the College. Letters to the staff and its advisors have voiced concern that the College and the magazine are following different paths.

Satchell Paige once made an appropriate observation about direction and perspective. “Never look back,” he warned. “Something may be gaining on you.” In a sense, the College itself is following his advice with a different rationale. The emphasis of the recent Agricultural Leader’s Forum at Cornell (reported on pages 8 and 9) was change, change in farming itself and in the whole industry of agriculture.

The emphasis at the College of Agriculture is on the future. Changes are taking place at all levels from instruction to research. The Countryman, as a magazine of the College, has reported these changes to its readers. Articles this year have examined the proposals of the Committee for Educational Reform, described new research and facilities at Cornell, and stressed the place of the College and the University in the community.

But the Countryman serves another purpose. Its content is researched, written and edited by students in the College’s Department of Communication Arts. Its pages reflect what is on student’s minds. Issues like Black pride, the Chicago police riot, and the military and the draft are discussed within its covers. And there is a particular approach which the magazine’s staff and editors have always tried to maintain. Facts are our bread and opinion our butter, not the other way around.

There are several facets to the Countryman’s reporting, for it is keyed to students as well as alumni and the College itself. The magazine reflects a college with a great past, but the traditions of both Cornell and reporting point to the future. It is with this idea in mind that the staff and editors of the Countryman approach the issues before them.



This was the cover of the first issue of the Cornell Countryman. In the 66 years since that issue, both the College of Agriculture and the magazine itself have grown. The Countryman today reflects a changing university.

SHACKELTON POINT

by JEFF MANFREDI '70



Scientific research is not always as glamorous as much of the public thinks. Here at the Cornell Fishery labs at Shackelton Point, researchers spend long hours exploring the lives of creatures in the waters of Lake Oneida.

“Lake Oneida stands in the midst of low hills, and of still virgin forests. A belt of thick foliage surrounds it on every side; its waters bathe the roots of the trees, which are reflected on its calm, transparent face; a simple fisherman’s cabin is the only dwelling on its shore . . .

“It was not chance alone that had led us towards this solitary lake. For it was the end and aim of our journey.”

These words come from *Erscheinungen am See Oneida*, the work of Sophie von La Roche, (1731–1807) one of Germany’s most sentimental woman novelists.

Since 1798, when the book first appeared, the “still virgin” forests have all but disappeared. Many summer homes, boating facilities and small towns surround Lake Oneida today. During the summer months countless fishermen explore the lake in search of the highly prized wall-eye. It is, as the people in the area will tell you, “the best eatin’ fish there is.”

Another visitor to Lake Oneida more recent than Sophie von la Roche was Charles Brown. An alumnus of Cornell, Mr. Brown purchased, before the Second World War, an area of lake front property known as Shackelton Point.

Mr. Brown intended to construct a farm using all the latest equipment and methods. It would be the most modern and efficient in the country. Many of the greenhouses, barns, chicken houses and spacious living quarters were already completed at the time of his death.

In his will, with the consent of his wife, the entire farm and surrounding lands were left to Cornell University. And for more than the last ten years Prof. John Forney of the College of Agriculture’s Conservation Department has been director of the Cornell Fishery Research labs at Shackelton Point.

During the entire year Dr. Forney, Charlie Taylor and

Before it became the headquarters of the Cornell Fishery research labs, Shackelton Point was owned by Cornell alumnus Charles Brown. Mr. Brown had intended to build the most efficient and modern farm possible on the land.



Dr. Richard Noble live and work by Lake Oneida. During the winter months, the snow-covered lake and grounds appear very bleak. For men any less dedicated the loneliness and cold winds would be too much to take.

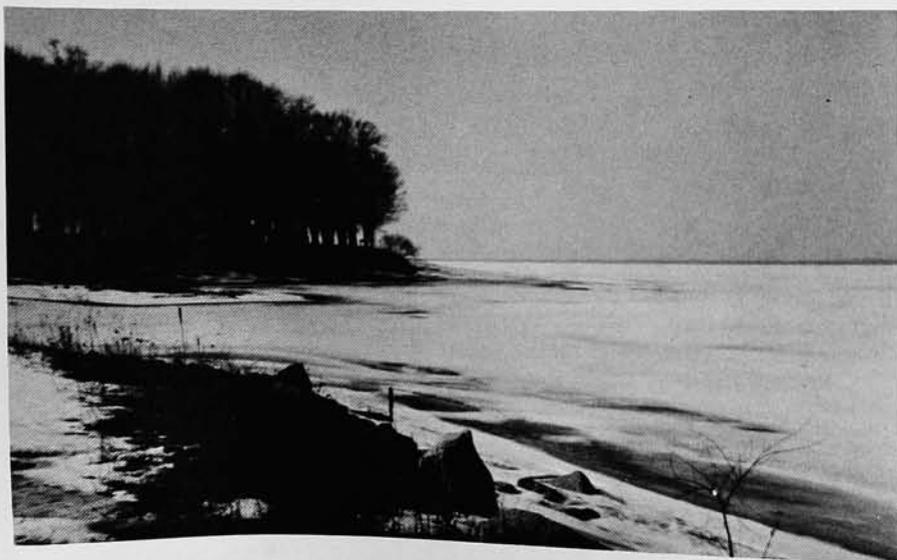
Instead, it is during these months that much of the technical and scientific work is done. Scale specimens collected the summer before are studied and the data is recorded. Algae counts and records of fish netted during the warm weather are analyzed, with the hope that trends and dynamics of the fish populations can be discovered.

As Prof. Forney would be the first to add, many people are involved in the Lake Oneida Project. Dr. Dick Noble has worked extensively with the lake's yellow perch population. Cornell graduate student Peter Hoffman has been studying walleye feeding habits for over two years. And whenever imagination or just a certain

type of equipment is needed for an experiment or a field trip, you can find Charlie Taylor giving the advice that's needed.

Each year Prof. Forney hires two or three fishery students to work at the lab during the summer. They spend a lot of time seining in different parts of the lake, keeping samples and records of their catches. Hours are spent in the lab counting and separating the various species of fry, mounting scales and recording the data from the gill net that is set once each week.

Conversations with some of the students who have spent a summer on Lake Oneida showed that they agreed living and working with Prof. Forney was a tremendous experience. And like Sophie von la Roche, they found it was the end and aim of one summer's work . . . and maybe the beginning of a lifelong journey into fisheries.



"Lake Oneida stands in the midst of low hills, and of still virgin forests. A belt of thick foliage surrounds it on every side; its waters bathe the roots of the trees. . . ." From the works of Sophie von la Roche, German novelist.

RESEARCH ON ROBINS AND DDT:

WILL THE WORM GET THE BIRD?

by NANCY KRUSE '70

Research on a Hudson Valley apple orchard has shed new light on the relationship between DDT spraying and robin mortality. Before 1965, studies showed damage to robin populations following DDT sprayings. The data came from college campuses and residential areas, where DDT was sprayed on elm trees in an effort to control Dutch elm disease. Biologists had never thought to examine a commercial orchard subject to continual spraying, assuming robins could not live there.

When robins were found nesting in a 300 acre Hudson Valley apple orchard with a 20 year history of DDT application, the relationship seemed to be more complex. Eric Johnson, a Ph.D. candidate at Cornell, has spent the past three years studying the robins in the orchard in an effort to solve the mystery.

On the surface, the fact that robins are nesting in an orchard regularly sprayed with DDT and other chemicals would indicate that the robins suffer no harm from pesticides. However, Johnson's investigations show that "the birds are present in the orchard, but they are not really living there." What he means is that the birds are unable to obtain food in the orchard. They must fly to adjacent, unsprayed land to get food. This is because worms, a staple of their diet, cannot live in the orchard soil.

Johnson explained that there may be as much as 400 pounds of DDT and other poisons in the topmost three inches of soil on an acre of orchard. Such conditions have virtually destroyed the robins' food supply within the orchard and forced the birds to forage elsewhere. Therefore, the robins do not live only within the artificial, simplified environment of the orchard. They are able to use it as a nesting ground because they travel outside the orchard to the more complex environment for food.

Actually it is fortunate for the robins that the food supply within the orchard is nonexistent. The worms and caterpillars which the robins catch and eat from the areas surrounding the orchard do contain some DDT which gets into their habitat from wind drift and runoff. However, the poison levels apparently are not high

enough to harm the birds feeding on these creatures. Johnson said that he had been unable to document any cases of robin mortality due to DDT.

Why is there actual loss of robins when DDT is sprayed on elm trees? The explanation lies in the fact that this spraying does not actually destroy the food supply of the robins in this area. Instead of being killed, the worms pick up enough DDT to kill the robins that eat them.

It would seem, then, that if we are going to use DDT and other lethal sprays, we should use them all the time and in large amounts. Obviously this is not a desirable solution to the problem, because if we are to have robins — or any wildlife — in our environment, we must keep some areas free of harmful pesticides. Any area, such as the orchard, which is sprayed constantly may cease to maintain a food supply for robins. When that happens, the area does not produce robins. It is used only as a nesting site, because to the robins it is visually correct for nesting.

Johnson said that early in the season it is possible to see robins trying to find food on the ground inside the orchard, but by the time they are nesting, they spend no time on the ground in the orchard. The robins are able to use the orchard environment only because there are areas nearby from which food is available.

The basic conclusion of Johnson's study is that although the high levels of DDT sprayed on orchards do not kill robins and prevent them from nesting in orchards, such spraying does create an unsuitable area for the production of robins by destroying the food supply. If the marginal areas where food is available are destroyed, or if foodless areas become too large for the robins to satisfy all of their needs within the distance they will travel, robins will not be found in the general area. Only areas free from regular or occasional spraying of DDT and other poisons will produce a safe food supply for robins and enable them to reproduce and to rear young. If we eliminate these regions, we can expect to have fewer robins.



USEFUL FOREST FIRES

by RICHARD CHARLES COLE '72

As early as the 1720's, English naturalist Mark Catesby noticed that longleaf pine fared much better on land that was burnt over than on land that was unburnt. He probably never knew that American Indians had practiced controlled burning for centuries to increase yields and prevent destructive wildfires.

Longleaf pine, found in the Southern United States, is a valuable tree whose conservation is essential to the economy of the area. Selective burning is often used to eliminate competition, prepare the seedbed, and control brown spot needle disease.

Since longleaf pine bear seeds every seven years, a large number of seeds must mature into trees for the pine stand to survive. The seeds are attractive to birds and rodents, so they must reach the soil quickly. A thick mat of dead needles or other vegetation on the forest floor prevents this, and a controlled fire is the only efficient way to prevent this buildup over a large area. If the burning is handled by experts, damage to mature pines will be minimal because longleaf pine has evolved a fire-resistant bark. Young plants must be protected from fire, but once the fire-resistant bark is developed (usually after one year) fire can be used again to burn off grasses and brush that compete with the young plants for water, mineral nutrients, and sunlight. The ashes of the burnt weeds can further serve as fertilizer for the young pines.

Controlled burning can also eliminate brown spot needle disease, which can devastate the young longleaf pines. Burning is much more effective than fungicide sprays because it does not contaminate and regeneration can take place almost immediately. Wildlife can escape from small fires, but fungicide residue lingers on. Parasites, as well as bacteria and fungi, are eliminated by burning. The selective application of fire can improve soil fertility, reduce the acidity of the soil, and increase the protein content of plants such as the longleaf pine.

Since Catesby's observations concerning fire and the longleaf pine, controlled burning has become an important tool for the conservation of plant and animal life. The longleaf pine probably owes its present importance as a commercial crop (and possibly its survival) to the use of controlled burning as a conservation tool.

The family farm has been the bulwark of American agriculture for decades, but the next ten years will see vast changes in both farming and other agribusiness. This prediction was stressed repeatedly by speakers in Cornell University's Agricultural Leader's Forum, a day-long meeting March 27 in Statler Hall.

F. Thomas Huheey, editor-in-chief of Farm Quarterly magazine and the lead speaker in the meeting, forecast that "corporate business structure will become the outstanding single force in agriculture in the '70's." Huheey pointed out that large investments, well beyond the reach of most farmers, are essential in financing competitive farms, and said corporate structure offered the most realistic means to necessary economic power.

"There are three major types of corporate structure that will be found in agriculture in the next ten years," he said, "the public corporation, the investor's corporation and the family corporation. The same advantages are available to all kinds of business. The size of the company would determine its competitive advantage.

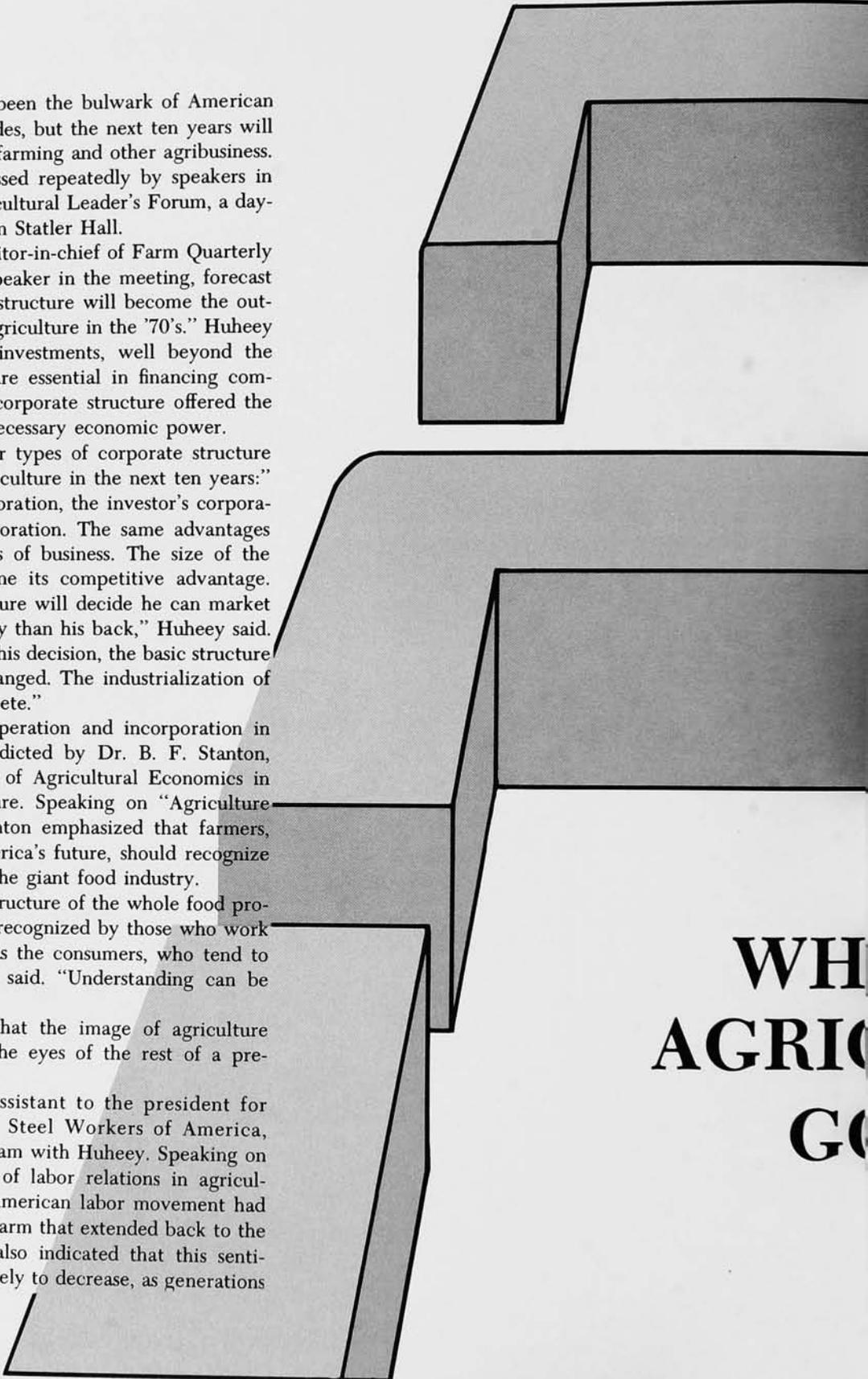
"The farmer of the future will decide he can market his brains for more money than his back," Huheey said. "When he finally makes this decision, the basic structure of agriculture will be changed. The industrialization of agriculture will be complete."

The trend toward cooperation and incorporation in agriculture was also predicted by Dr. B. F. Stanton, head of the Department of Agricultural Economics in the College of Agriculture. Speaking on "Agriculture in an Urban State," Stanton emphasized that farmers, a minority group in America's future, should recognize their position as part of the giant food industry.

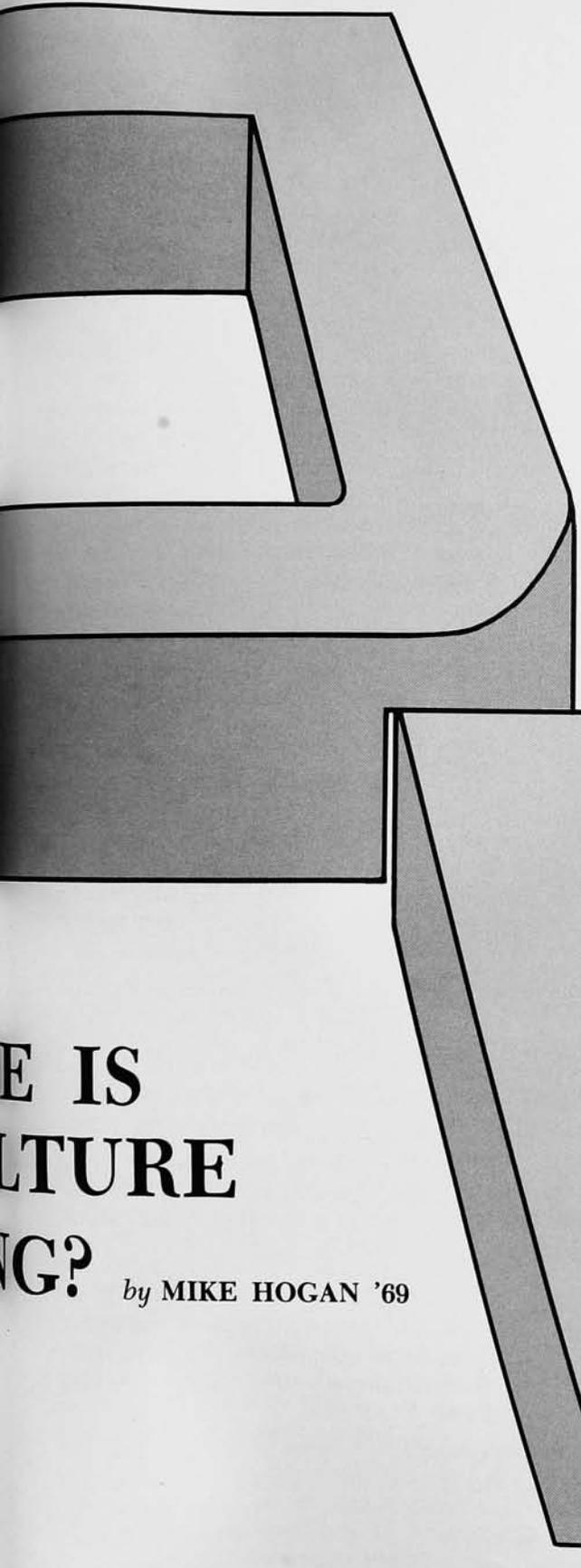
"The interdependent structure of the whole food producing complex must be recognized by those who work in the industry, as well as the consumers, who tend to take it for granted," he said. "Understanding can be created."

Stanton also stressed that the image of agriculture should be improved in the eyes of the rest of a predominantly urban society.

Frank L. Fernbach, assistant to the president for special projects, United Steel Workers of America, shared the morning program with Huheey. Speaking on the controversial subject of labor relations in agriculture, Fernbach said the American labor movement had sentimental ties with the farm that extended back to the Populist movement. He also indicated that this sentimental attachment was likely to decrease, as generations



WH
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GO



E IS LTURE G?

by MIKE HOGAN '69

of workers grow up away from the land.

Fernbach predicted an increase in number and membership among farm labor organizations, citing the collective action of California grape pickers as an example. He also listed areas in which farmers could expect support from labor organizations: income support, collective bargaining by farmers, and the growth of industry in rural areas.

"In looking to the future," he concluded, "don't write off the support of labor. About 90% of our concerns are for general welfare. I think there's still a little modern-day Populism that we can stir up for good purposes."

Ronald W. Pedersen, assistant secretary to Gov. Rockefeller for programs, was the first speaker of the afternoon session. In talking about "The Impact of Resource Planning on Agriculture's Future," Pedersen said land use planning had not affected farming up to this time, but predicted a change.

One reason for the change, he said, was that many planning efforts in the past had not been in touch with actual development.

"But the good planners have come down," he said. "They have realized that planning for planning's sake is of little value. They have realized that their value lies in the capacity to assemble information in a useful way and, within fiscal and political realities, suggest alternatives or make specific recommendations."

In conclusion, Petersen predicted land-use planning could have an effect on the future of agriculture. "The exact nature of the impact," he said, "depends on the level of commitment we assign to sound resource planning, its implementation and our future."

The Forum's program concluded with a presentation prepared jointly by Profs. Robert Story and Lowell C. Cunningham of the Department of Agricultural Economics. Prof. Cunningham stressed that competition for labor would be a fact of life for New York's dairy industry in the future.

Describing trends in dairy production, Cunningham said increased efficiency had offset declines in the number of farms, workers and cows in the past decades. He predicted that total milk production in the state would remain fairly constant in the next few years.

Prof. Cunningham pointed out steps that should be taken to attract labor to farm jobs, and said farmers should be prepared to make major adjustments to attract workers.



In The Mood For Drawing . . .

by DARA PRISAMT '71

"Freehand drawing? I never knew there was an art department in the College of Agriculture!" The reaction is a typical one for students learning of the Division of Freehand Drawing in the Department of Floriculture and Ornamental Horticulture. Since the art rooms, on the fifth floor of Mann Library, are usually reached by a strange combination of elevator and stairway, it's not surprising many students don't discover them during their first year or so at Cornell.

Classes in drawing and illustration are taught by Professor Jack Lambert and Mrs. Ann Elliot, and are made up of students from many of Cornell's separate colleges. Due to the wide range in student's abilities, individual improvement is stressed. The atmosphere is described by student Rob Hempstead (Agr. '71) as "relaxed and low-pressure."

"If you don't feel like drawing," he said,

"you can sit and talk or think and nobody will tell you to stop wasting time. If you're in the mood for drawing, you can stay for hours."

Many courses in Freehand Drawing are quite flexible, encouraging experiences with many art media. Some of the more popular techniques are pen and ink, woodcuts, pastels and watercolors, while expression may range from fashion illustration to abstract drawing.

Cindy Swan, a sophomore in the College of Home Economics, said "Freehand Drawing gives me liberty with guidance . . . no pressure and lots of fun. Improvement comes along with enjoyment."

The success of the Division of Freehand Drawing is due to this atmosphere, in which students are encouraged to do what they like best and improve at it. The emphasis would make any department popular.

DOES INDUSTRY DESTROY?

by ANNE SIMON '69

As we race for outer space, whose responsibility is it to see that "inner space" is not destroyed? How rich shall we be when we've converted all our forests, wild-life and water into material goods?

Conservationists, seeking the solution to these questions, realize that we live in a world of two environments. Today, the world of nature is contrasted against the man-built world — including all of its technology and the resulting smokestacks, skyscrapers, polluted water and smog.

To many, it is obvious that the triumphs of science haven't always brought unadulterated blessings. Prof. Richard McNeil, of Cornell's Conservation Department, in assessing the problem, points out that although indestructible aluminum containers improve the preservation of foodstuffs, they also may destroy the aesthetic quality of roads and waterways. Another Cornell scientist, Prof. Fred Winch, indicates the problem of salted snow-covered roads. Winch pointed out that salting may facilitate transportation, but salt accumulation along roadsides at the rate of twenty tons per mile may thoroughly annihilate local plant life.

Thus, it is apparent that the growth of population and industry has created an enormous gap between the technology of creating goods and our technology for disposing of the resulting wastes. Because of these changes the task of conservation today is to apply human understanding and wisdom to this dual environment.

The public must be made aware of the constant threat to nature of industry and development. Man must realize that if we think short term economic wealth more important than the ways of nature, we may well eventually smother in the wastes of our own affluence.

Apparently, the fault lies not with the progress of technology, but rather with the lag of the appropriate conservation measures. The ultimate problem is a question of responsibility since we want both economic wealth and a quality environment.

Many conservationists believe that much of the responsibility for a high grade environment lies with industry.

But, according to Prof. McNeil, "In general, one can't

be proud of industry's role." He points out that the blighting effect of industry is well known. However, little attention is usually given to preserving natural habitats in any heavily industrialized area.

In our economic system, traditional engineering and industrial planning have been geared to profits only and not to the living conditions of the employees. Frequently, the dynamics of urban growth and industrialization have nibbled away at our natural resources. In many cases industry has moved on leaving a destroyed area behind.

Although the partnership of industry and conservation has been ineffective, Prof. McNeil insists that the future is neither bleak nor hopeless. Several industries, especially those directly involved with natural resources, have recently taken an active interest in promoting conservation measures. The timber industry is an exceptional example. Realizing that the nation's wealth of resources is rapidly diminishing, many lumber companies are making a conscious effort to renew available resources and to protect and preserve the remaining non-renewable ones. This effort goes beyond replanting forests. In many cases it consists of purifying discharges released into waterways and preventing air pollution.

One newcomer to the conservation effort is Coor's Brewery of California. By offering one penny for every returned beer can or bottle, the company is sponsoring a clean-up of the nation's littered highways. Although this campaign will probably result in a minor economic loss, the company will gain valuable goodwill.

In addition, several large foundations are donating research grants so that technology may provide for its wastes and protect the environment it uses.

In summarizing the problem, Prof. McNeil feels that it is essential to implement a positive attitude in industry before additional damage is done.

By encouraging progressive conservation projects, industry will be forced to realize that most material wealth comes from the land in one form or another. In a world encumbered by diminishing natural resources and an exploding population, industry must apply its scientific strength and economic power to prevent our planet from being flooded in its own wastes.

AN END TO WATER

POLLUTION?

by CHANNING R. KURY '70

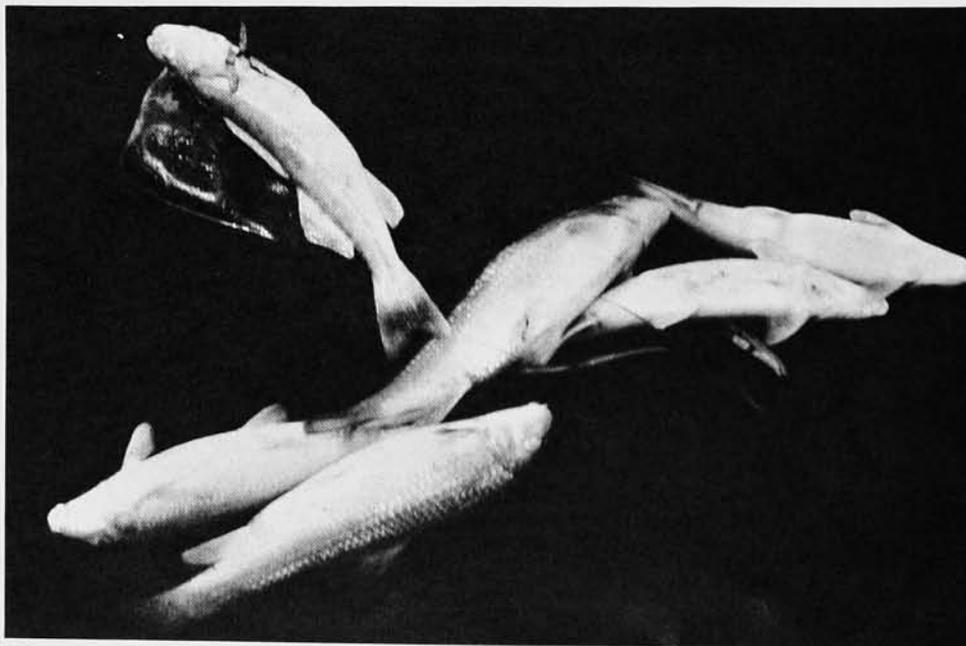
Water pollution is a ubiquitous and continuing problem plaguing the United States. Pollutants involved may be poisons, acids, raw sewage or even heat. Pollution exists when the normal state of the water is changed by any one of numerous chemical, physical or biological factors to make the water less pleasant, less usable, or a health hazard.

In the state of New York there are many problems with water pollution. Two which have received considerable publicity are the polluted condition of Lake Erie and the proposed use of Cayuga Lake for cooling by a nuclear-fueled power plant. Less widely publicized but still significant are smaller local examples of pollution. Fall Creek in Ithaca, for example, is polluted because the villages upstream lack adequate sewage treatment facilities. When all of the small scale pollution problems are added together, the effect is staggering. A comprehensive pollution control program must not

only deal with headline-making instances but also with more commonplace examples.

Such a pollution control program would be made possible through a water quality bill introduced into the House of Representatives by Rep. Richard D. McCarthy of New York. Introduced February 25, 1969, it is a far-reaching piece of legislation, dealing with water pollution by sewage, heat, oil and mine acids. Similar legislation has been introduced into the Senate by Sen. Edmund S. Muskie of Maine. Both bills have many co-sponsors and have received much attention because of the Santa Barbara oil crisis.

Two of the many facets of Rep. McCarthy's bill are of outstanding interest to New York State residents. The bill would enable the Federal Government to sponsor many more pollution control projects, by allowing a capital financing approach instead of the traditional individual grant support. The upshot of this would be that



The fish in the upper left is a walleye, the rest are suckers. They were killed by mine acid pollution in the North Branch of the Susquehanna River, near Sunbury, Pa.



These fish were all killed by mine acid pollution in the North Branch of the Susquehanna River. According to the Pennsylvania Fish Commission, there are about 3,000 miles of streams in that state too polluted by acid for fish to survive.

the projects that are needed will get built in the near future, when they will be most effective. Costs would be deferred for ease of payment. If pollution control were to be dependent on grants, considering the present fiscal financial state of the Federal Government, resulting programs would be small compared to what is needed.

A second aspect of this clean water bill is especially pertinent to the controversy raging over the proposed use of Cayuga Lake by a nuclear-fueled power plant for cooling purposes. The bill would make pollution control part of any Federal agency's licensing function for installations.

For example, the Atomic Energy Commission would have to insure that nuclear-fueled power plants avoid thermal pollution as well as radioactive pollution. If this were presently in effect, the Bell Station nuclear-fueled power plant at Cayuga Lake might have to be built with cooling towers, to avoid heating lake water.

Among the provisions of the bill is a requirement that boats and commercial ships have facilities to prevent the discharge of raw sewage into inland and coastal waters. The oil spillage provisions were written before the Santa Barbara oil crisis and are likely to be revised with this disaster in mind.

Another clause of this water quality bill provides assistance for the development of techniques to control mine acid drainage, which makes many streams in coal mining areas devoid of fish. There are some 3,000 miles of streams like this in Pennsylvania alone. In addition to being without fish, the condition of these streams is an economic hindrance. Many of the areas in which the streams occur are economically depressed already.

The entire bill is much more extensive than indicated here, for not all the provisions have been disclosed. It will undoubtedly be amended, but the chances are excellent that the House will pass it. The same prospect holds for Sen. Muskie's bill in the Senate. If both bills pass, their differences must be resolved. Similiar bills passed last year but the differences were not resolved. If approved by both legislative bodies, the bill would be sent to the President.

An effective water control law is essential. Our ever-growing population is increasing its continuous stress on the environment and especially on our water resources. In the face of these pressures, to stay abreast is to fall behind. A comprehensive water pollution law is needed this year.

WRITING YOUR OWN THING

by CHRIS AGER '71



When the huge elm in front of Willard Straight Hall was cut down last fall, a casualty of Dutch elm disease, the stump that was left immediately became a rallying point for Cornell's thriving population of graffiti writers. Within 24 hours, it was covered by comments as diverse as their authors.

The original crop of graffiti bemoaned the loss of the tree. "This tree died for our sins . . ." appeared in magic marker, and some student raised a moral question by asking, "Is euthanasia for Dutch elm disease justified?"

Since that time several generations of graffiti have come and passed, as the stump is painted and repainted by intrepid writers desiring new surface area. During that first week, however, a revealing comment about graffiti itself appeared . . . "Aren't the Uris stalls enough?"

"It's interesting to note that any new, temporary, and defaceable surface that appears on campus is almost immediately attacked and covered with graffiti. The subject matter? Anything worth a laugh or open to criticism. Happily, although campus graffiti often borders on libel, it rarely descends to the bad taste of the infamous Uris Library washroom.

Grffiti writers are characterized by candid criticism. Around the campus store construction site's plywood walls, spray paint declares that the whole thing is "Ugly! Bury it all . . . Day Hall, too." Another opinion of the construction avows that "This is a good eyesore, but not an excellent one." Many criticisms are aimed at a caricature of the University itself. "This is an Ivy League school (?)", and scrawled over a roll of tissue paper,

"Cornell diplomas— take one."

No one is safe from the attacks of the avid graffitist. "President Perkins has high anxieties." is prominently displayed on the fence facing the Straight. "Bobby Goldsboro sleeps with a teddy bear." and "Where is Lloyd Bridges today, may I ask—Sky King." suggest that the private lives of entertainers may not be so private.

There is a small amount of graffiti aimed at minority groups, but not too much. The organization that gets the most copy is Students for a Democratic Society (SDS). For example: "SDS = SS"; "Hang for peace." and "SDS to USSR in '72." Two more definitions of SDS are offered, presumably by non-members: "SDS: Students for the Destruction of Society" and more mildly, "SDS is a palindromic organization."

Variations on a theme have a certain amount of popularity:

Boredom is the root of all evil.

Evil is the boredom of all—Root.

Root is the evil of Alldom—Bored.

A bored root is evil—Dom All.

Evil is the root of all boredom.

Several other undecipherable variations were too cryptic for reproduction. More topical, perhaps, is this. SDS, as usual, gets the last word.

God is dead—SDS

SDS is dead—Perkins

Perkins is SDS—Dead

Perkins is dead—SDS

In a more philosophical vein, two more comments on the campus store fence parody Descartes, "I think, therefore I exist."

I think I exist, therefore I exist, I think.

I think, I think, therefore I think.

Original philosophy is more common: "Death is Nature's way of telling you to slow down."; "Is there life after birth?"; "Nothing happens. Time just is!" and in the manner of multiple guess prelims, "Life is: (a) a control group. (b) a terminal disease."

As they say, life is full of warnings. Graffiti is a medium that contributes its share. "You are what you eat . . . be careful what you eat.": "When you're dead, you're dead."; "Beware of paranoia, there may be a Narco standing behind you." And from a student probably fed up with his roommate: "I hereby vow to resist the growing conspiracy to make me paranoid."

As a parting shot, here are two conservationist viewpoints as a public service. Take them or leave them. "Swan Lake is polluted." And a suggestion close to home: "Keep the campus beautiful—plant a flower."

ALUMNI

Joseph P. King '36, chairman of the College of Agriculture Fund, has announced Chairmen and Vice-Chairmen for two phases of the Fund. Earl C. Foster '26 of Baldwinsville has been named Chairman for the General Alumni program. H. Joseph Pendergast '38 and Russell O. Smith, Jr. '54 have accepted positions as Vice-Chairmen to work with Foster.

The annual College of Agriculture Alumni Breakfast will be held on Saturday, June 14 at 8 a.m. in Noyes Lodge on the Campus. All Alumni, whether officially reuniting or not, are welcome. Last year nearly 80 Alumni enjoyed the good food and informal get-together.

This issue of the Cornell Countryman had gone to press before the recent events had shaken the Cornell campus. We will spend the summer trying to bring developments into perspective and hope by the first issue in the Fall that we can add significantly to your knowledge of a complex and confused situation.

PICTURE CREDITS

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Another New Research Facility

Cornell University will dedicate this new \$4.6 million Entomology-Plant Pathology Laboratory at its New York State Agricultural Experiment Station at Geneva on May 20.

The formal dedication of the new building will bring to an official close more than 20 years of planning for providing this agricultural experiment station with one of the finest insect and plant disease research laboratories in the world. On the day following the dedication, there will be a major scientific symposium on "Potentials in Crop Protection."

