What's new?

When someone asks this question today they are not easily impressed with enrollment figures. Statistics have been thick for years about the multiplying population.

However, the New York State College of Agriculture at Cornell does feel enrollment figures are newsworthy when they buck the national trend among agricultural colleges and reach record proportions while doing so.

Total enrollment in the College this fall reached 1,915. The new student enrollment in the College of Agriculture has been more than 600 every year for the past three years.

The College also points with pride to the new record reached in transfer students. Our staff and facilities will provide them with the advanced subject matter and technical training needed for professional success.
Man and Nature

Contrasts between the rural hick and the urban sophisticate are as old as society itself. Such comparisons are usually surface comparisons; the urbanite has had more “experience” than the rural man, and thus is more able to enjoy the richness of life, so to speak. There is a difference which is much deeper however, and which reflects much to students of society and social “progress.”

The rural man is usually a farmer, or he is indirectly dependent on agriculture for his livelihood. From this close connection with nature stems his basic philosophy of life. He recognizes Nature’s dominance of man’s life. He knows that a farmer with the most modern machinery and latest technical knowledge is powerless against the hail and frosts that may destroy his crops. The rural man is at the mercy of Nature and this is reflected in his ideas and actions.

Though he may be reluctant to admit it, the urban man bases much of his life on the converse: man’s dominance over Nature. Why not? His contacts with Nature have been minimized through his own and his fellows’ ingenuity. He sees about him the works of men—their nearly perfect conquest over nature. To the urban man, Nature is a provider, a force than has been harnessed and which behaves like a good servant.

It would be extremely naive to slap a value judgment on either of these modes of life. But this analysis is valuable in that it reflects either the progress or regression of society, accepting the fact that society is being urbanized and depending on the reader’s viewpoint. The analysis obviously comes down to a question of man’s power. Is collective society, according to Erich Fromm, the full, complete and powerful Supreme Existence? Or is man secondary, a powerful genius lacking that iota of strength which separates him from Omnipotence?

The writer does not propose an answer. But the questions, old as they may be, assume a newness in these days of the doubting of man’s goal and reason for being. The individual may find his own answers by logical testing of the arguments. Let him have the strength to employ this logic.

---

CORNELL COUNTRYMAN

Vol. LX October, 1962 No. 1

In This Issue

Editorial ...................................................... 1
Schoolhouse Meets Demise ................................. 3
Way Out on Tower Road ................................. 5
Children’s Art ............................................... 6
Upper Campus Activities ................................. 8
Class of ‘66 Overview ..................................... 10
13 Pros Retire ............................................. 11
Letter From Argentina ................................. 12

The Cornell Countryman is published monthly from October through May by students in the New York State Colleges of Agriculture and Home Economics, 490 Roberts Hall, Cornell University, Ithaca, New York. Second-class postage paid at Ithaca, New York. Printing by Norton Printing Co. of Ithaca. Subscription rate is $1.75 a year or two years for $3.25; three years for $4.50; single copies, 25 cents. A member of Agriculture College Magazines Associated. Represented for national advertising by Littell-Murray-Barnhill, Inc., 569 Lexington Avenue, New York 17, N.Y.

---

Staff

Editor-in-Chief ......................... Paul Roman
Managing Editor ....................... Hillary Brown
Associate Editor ..................... Steven Reinheimer
Business Manager .................... Alice Fried
Advertising Manager .................. Frank Goetschius

EDITORIAL BOARD

Circulation Manager, Robert Benedict; Art Editor, Nancy Felthousen; Photography Editor, Richard Wallach; Elizabeth Vedder, James Sample, Michael Self.

BUSINESS BOARD

Dennis Bruce, Cheryl Kurtzer

BOARD OF DIRECTORS

Prof. Emilie T. Hall, Prof. William B. Ward, Prof. Thomas C. Watkins

COVER

Depicting fall, the cover drawing of Indian corn ready for harvest was designed by Art Editor Nancy Felthousen.

October 1962
Variety: the spice of life
at American Oil
by Jim Koller

"When I was first interviewed by American Oil representatives I was told I'd be given a free hand in guiding a wide variety of projects. This promise has certainly been kept!"

Jim Koller, 25 years old, came to American Oil right out of the University of Wisconsin where he earned his Bachelor of Science degree in Chemical Engineering. An Evans Scholar at Wisconsin, Jim describes his job at American Oil this way: "I work on basic chemical engineering problems, specializing in reactor design and process development problems. Before a process can go commercial, it must be tested in pilot plants. That's where I come in." Jim wants to stay in the technical research area, and plans to enroll in the Illinois Institute of Technology night school for courses in advanced mathematics.

The fact that many gifted and earnest young men like Jim Koller are finding challenging careers at American Oil could have special meaning for you. American Oil offers a wide range of new research opportunities for: Chemists—analytical, electrochemical, inorganic, physical, polymer, organic, and agricultural; Engineers—chemical, mechanical, metallurgical, and plastics; Masters in Business Administration with an engineering (preferably chemical) or science background; Mathematicians; Physicists.

For complete information about interesting careers in the Research and Development Department, write: D. G. Schroeter, American Oil Company, P.O. Box 431, Whiting, Indiana.

IN ADDITION TO FAR-REACHING PROGRAMS INVOLVING FUELS, LUBRICANTS AND PETROCHEMICALS, AMERICAN OIL AND ITS AFFILIATE, AMOCO CHEMICALS, ARE ENGAGED IN SUCH DIVERSIFIED RESEARCH AND DEVELOPMENT PROJECTS AS:

New and unusual polymers and plastics • Organic ions under electron impact • Radiation-induced reactions • Physicochemical nature of catalysts • Fuel cells • Novel separations by gas chromatography • Application of computers to complex technical problems • Synthesis and potential applications for aromatic acids • Combustion phenomena • Solid propellants for use with missiles • Design and economics: new uses for present products, new products, new processes • Corrosion mechanisms • Development of new types of surface coatings.
The "Little Schoolhouse," a building with a long and varied history, is no longer a landmark on the College of Agriculture campus. On July 18, the schoolhouse was torn down to provide land for the new Graduate School of Business and Public Administration Building.

The little building was originally planned by Liberty Hyde Bailey, former dean of the College of Agriculture, as part of a school improvement campaign. In 1903, Bailey decided to construct a model school on the campus at a price any rural school district could afford. He stressed simplicity so the cost might be kept down. He presented the plan to Cornell President Jacob Gould Schurman in 1904, but the idea was turned down. Shortly, however, the necessary funds were available and a model schoolhouse was completed in the spring of 1907 at a cost of $1800, with Gibb and Waltz of Ithaca as architects. The finished product was a simple wooden structure measuring 35 by 37 feet.

Learning by doing

In keeping with Bailey's philosophy of "learning by doing," the building contained not only a classroom for 25 pupils, but also a laboratory for the study of plants, stones, insects and other natural objects. The laboratory was designed so students could do individual lab work as well as study from books—an idea very popular at the time.

But even after it was built, "Bailey's Folly," as it was called by some, still had many problems. For one thing, it lacked students; not so much in Ithaca, as in the areas around Ithaca. Schools in areas such as Caroline, Danby, and Dryden had so few as two pupils. The general feeling was in favor of consolidating rural schools and opposed to another school for only a few students.

Upon completion of the building, the University trustees refused to permit Bailey to organize it as a rural school, and it was rented to Martha Hitchcock, who ran it as a private school for a short time. When the school house was rented, Bailey made several efforts to have another built, but these efforts were unsuccessful.

Nature study center

In 1908, the building was turned into a nature study office for the College of Agriculture. Classroom instruction was given in the school by Anna B. Comstock for those who wanted to be nature-study teachers and the school gardens nearby provided actual practice.

While she was teaching in the little schoolhouse Mrs. Comstock wrote articles and leaflets intended for farm women. Eventually, she offered her papers as a gift for the University to publish. But her book was turned down by Cornell as it was later to be turned down by many publishers in New York City and the State Department of Education.

At the time there was a publishing firm in Ithaca owned by Comstock, Herrick, Gage and Needham. These four men appreciated Mrs. Comstock's illustrating of their books in earlier years and they agreed to be her publisher. Within a few years, the book, "Handbook of Nature Study," was earning $5,000 per year—more than any other book published by the company at that time. That original company gradually was absorbed into the Cornell University press.
Miss Minn's Garden, formerly situated behind the Little Schoolhouse, were relocated in front of the Plant Science Building to make room for the new BPA school.

Bailey's dream comes true

Up until World War I, the building was a model of what Bailey had strived for. While never used as a school for children as he had envisioned it, the building contained equipment helpful to rural school teachers. The nature study department placed pictures on the walls and displayed children’s books, aquaria, terraria, insect materials, bird and earth-science materials. The building with its gardens was a concrete demonstration of a functioning rural school.

From 1908 to 1919, the school also served as the editorial office of The Rural School Leaflet, a publication providing subject matter in nature study. In 1919, the Cornell Countryman moved into the building where it was housed until 1933.

In 1933 the building became a radio studio from which WESG (now WHCU) transmitted until 1940. The schoolhouse then became an annex of the radio division of the Department of Extension Teaching and Information.

Liberty Hyde Bailey practiced what he preached. The late dean made use of the laboratory method of learning throughout his life. Here he is examining specimens of palm leaves.

"This Week in Nature"

Dr. E. Laurence Palmer, professor emeritus of rural education and author of over 600 titles in his long and fruitful career, has many wonderful memories of the years he spent broadcasting from the little schoolhouse. Dr. Palmer's "This Week in Nature" was a fifteen minute weekly program on WESG devoted primarily to children.

"We would have the kids come into the studio and broadcast just what was going on," explained Dr. Palmer. "Four of them would bring in something for me to identify, which I could usually do, and then I would spend some time getting them to talk about the one thing which I knew most about."

"There was one student, John Marcham, (now editor of the Alumni News) who would always bring in something to stump the professor. Well, one time he brought in a small, white pelt which had me stumped. It was about the size of a rabbit, but I knew it wasn't that. It just never came to my mind that it was the pelt of a new born lamb. He got me on that one."

Entrails for dinner

There were also embarrassing moments brought on by what the children said on the air. One time Dr. Palmer decided he would talk about birds. No matter what he said, though, he could not get the children to begin the discussion. It was near Thanksgiving, so he decided to ask them what was the first thing which they expected to have for Thanksgiving dinner. One girl raised her hand and said, "The very first thing we will have for dinner will be entrails." Dr. Palmer smiled recalling this incident and said, "Of course we had to go right on with the program."

The program of which Dr. Palmer is particularly proud won the first national award for school programs at the Ohio State Radio Workshop. Dr. Palmer was talking about a snowbank outside the window, and told the children that it was warmer under the snow than on the surface. They did not believe such a thing could be possible. So Dr. Palmer took the microphone and the children out through the window and measured the temperature.

End draws near

From 1940 to 1945, the building was used for broadcasting the Cornell Farm and Home Hour over WHCU, but the station removed the last of its equipment in 1945. Until this spring, the schoolhouse was used by the college radio division for making tape recordings.

Thus we mark the demise of another Cornell institution—somewhat sadly, in the name of Progress. But the building typified another era, an era of the past. We of Cornell have a rich tradition behind, but must be oriented to the future.
Way Out On Tower Road

by Steven Reinheimer

F EW students realize that an important Federal agricultural research laboratory is situated right on the Cornell campus. Since it is located far down Tower Road the lab is unknown to most undergraduates.

Housed in an attractive red brick colonial building, the U.S. Plant, Soil, and Nutrition Laboratory was established in 1939 under the direction of the Secretary of Agriculture, as a unit of the Agricultural Research Services Soil and Water Conservation Research Division.

Reversing the tradition whereby federal land was turned over to land grant colleges, Cornell deed the two-acre site to the United States Government. The lab cooperates with the Cornell Agricultural Experiment Station under a memorandum of understanding. The program of the laboratory is national in scope and is centered around factors influencing the nutritional quality of plants.

According to Dr. W.H. Allaway, director of the laboratory, an important part of the lab program is to determine the influence of soil on the nutritional quality of plants and to find why some nutritional diseases in animals are found only in certain areas.

There is no doubt of the importance of this laboratory in the field of animal and human nutrition. Many organizations throughout the country sponsor educational programs on purchasing food. Large sums of money have financed research to conserve nutrients in processing, storing and cooking foods. Until recently, however, a large gap in this vital field still existed. It is the objective of the U.S. Plant, Soil and Nutrition Laboratory to improve the nutritional quality of food actually consumed.

Though a federal agency, the laboratory maintains close connections with Cornell. This situation is mutually advantageous to the university and the laboratory. As part of the Cornell University campus, the lab has the facilities of the university available for its research programs. Graduate students and staff members of the College of Agriculture often participate in the laboratory's experiments. Likewise, scientists from the lab have been appointed to positions on the Cornell faculty.

This laboratory is unique because it integrates the relationship of plant, soil and animals. The scientific staff pools knowledge and techniques for an integrated attack on the problems presented to the laboratory.

For the past 23 years the laboratory has worked on a great number of important nutritional problems. The Plant, Soil and Nutrition Laboratory began its research by undertaking a study of the mineral deficiency diseases of both plants and animals. The objective of the project was to construct maps classifying the geographical regions of the United States, showing the distribution of soil related to nutritional problems affecting animals. The laboratory's findings are used to advise farmers on how to supplement livestock diets to make up for nutritional deficiencies of their particular region.

Another study served to establish the effects upon the vitamin content of vegetables when soil, fertilizer and weather conditions are changed. Plants were subjected to various environmental changes with the results yielding important nutritional information. Scientists did not end their research here. The plants were fed to test animals to measure their effects on growth, reproduction and metabolic processes.

The laboratory is currently concentrating on two projects. The first is related to the movements, availability and functions of trace minerals in the food chain from soil to plant to animal. The second project is directed toward a better understanding of how amino acids and proteins are formed in living cells.

One of the trace elements sub-projects is centered on the relation of the Selenium content of forage plants and the occurrence of muscular dystrophy in cattle and sheep. Studies of the mechanisms of protein synthesis have resulted in discoveries which may be applicable in genetics and cancer research.

The future promises to offer an expanding role to the laboratory. A new wing is nearing completion and will provide additional space for a larger program. One of the world's fundamental nutritional problems which will be studied is protein malnutrition.

We at Cornell should be aware of the important part the U.S. Plant, Soil, and Nutrition Laboratory plays in programs designed to improve the health and well being of people throughout the world.

Inside the Federal Nutrition Laboratory, research is conducted to classify the chemical content of soil geographically while...

Outside, practical experiments are carried out to determine the influence of various soils on the nutritional value of plants.
Is an elephant yellow? Can a dog smile? Should daddy resemble a barrel balanced on two toothpicks? These questions are often asked by parents after seeing their children's art work. According to Dr. Lambert Brittain, associate professor of child development and family relationships, the answer is simply “Why not?”

Dr. Brittain has studied and evaluated many pictures drawn by youngsters in relation to their developmental growth. He has done extensive research in the field of children's art and has discovered that as a child matures, his paintings become more detailed and realistic. This is due to a developing curiosity about new experiences. Sand, once colored a bright orange, conspicuously changes to a paler yellow after a child spends a day at the beach building sand castles; and the ocean, a source of great fun, is suddenly blue. The emotional significance and relationship of these experiences leave their mark on a child and are often illustrated on paper.

“For this reason alone, it is important to expose children to new delights and wonders,” stresses Dr. Brittain.

Looking at children's art work is seeing the world through the eyes of a child. Color and proportion are disregarded; but this is a youngster's logic. When a child uses his favorite color, red, to draw his “best” mother, who can say he's wrong? Or when a child, suffering from a headache, pictures himself with a head three-quarters of the page, an adult cannot question this logic.

Another typical peculiarity in most younger children's pictures are the ever-present lines—one at the top of the page to represent the sky and another at the bottom on which people, animals and houses stand. This pattern continues until the child becomes aware of perspective and it plays an important part in his world.

“Often a child will draw the same object, such as a boat or a puppy, in all of his paintings. Constant repetition reveals a sense of curiosity and a desire to explore this new object which has been introduced into his world,” explained Dr. Brittain. If this pattern continues, though, it often signifies that the child's mind is not flexible enough to invent a new interest. Thus a child should be introduced to new objects and...
situations regularly so his questioning mind can be developed and satisfied.

Children’s attitudes can often be spotted by paying close attention to their drawings. A small girl might picture her brother’s pet turtle, which to her is squirmy and messy, in a much different manner than the turtle’s master himself.

Unfortunately, youngsters are often restricted in their choice of subjects and style, and their work becomes conforming and meaningless. Just as a teacher would not command her students to play within the boundaries of a small area on the playground during recess, so she should not force them to draw within the confines of a coloring book. Studies have proven that coloring books limit a child’s imaginative and creative growth and these pre-drawn figures have no place in a child’s world. These books are drawn by adults and they only picture the adult world. If encouraged to use them, a youngster’s freedom and originality may soon disappear and he loses confidence in his own figures. Knowing they cannot compete with these “adult” forms, children become discouraged and lose interest in their art work. Therefore, to develop a means of expression a child should be allowed to “draw with a free hand.”

**Paintings reflect emotional growth**

The emotional progress of a child can often be traced by studying his drawings. Between the ages of two and four, a youngster given a crayon will scribble a few lines and circles on a paper. After some practice these scribbles become controlled. At about the age of four, a child gives names to these unconnected lines and imagines objects as he draws. After completing a picture, he may often point out his dog and his house among the scribblings, which to an adult has little meaning. By the time he reaches the age of six, a child should be able to draw real objects, for his relationship to his environment has steadily changed and he has become aware of this. After the age of seven, all children should relate their thinking to imagery and draw recognizable subjects.

At the age of ten, youngsters begin showing their social awareness on paper. Girls tend to draw themselves wearing pretty dresses with frills and their hair in curls, while their male counterparts are pictured in long pants, crew cuts, and mastering various sports.

At this time, visions of the future also appear in children’s art. Houses “where I want to live” or “the place where I plan to visit” are drawn with extensive detail and imagination.

**Criticisms limit creativity**

As a child goes through these stages, parents and teachers must realize that well-meaning explanations and criticisms limit the child’s imagination and therefore his creativity. Interfering with a child’s method or showing a child how to “draw correctly” is severely hampering a child’s normal growth. When a child is “taught” how to draw a house, for instance, the conception of the house may be entirely different from the one the child had in mind and would have drawn. If this procedure is repeated, there may soon be a noticeable absence of houses in this child’s drawings.

“The best way to help a child grow to understand his environment, and therefore be able to picture it realistically, is to introduce him to new experiences and make him aware of his surroundings,” said Dr. Brittain. “It is from these impressions that a child can achieve artistic ability and express himself without inhibiting creativity.”

Collages, or scraps of various materials pasted together into three-dimensional abstracts, are another creative outlet for children.

by Hillary Brown
Upper Campus Activities

Most students in the Colleges of Agriculture and Home Economics at Cornell are majoring in a specific field, ranging from child development to vertebrate zoology. Often one becomes acquainted with others in his major field through class contacts, but these conversations are usually inadequate.

Over the years, many of the students have organized special interest clubs in the various fields. All of these clubs are open to anyone interested in the subject, but primarily concerned with stimulating strong interest among the majors in the particular field.

As a service to these groups, Ag-Domecon Council presents the following brief sketches of the various organizations and their activities.

Ag-Domecon Council, the student governing body of the Colleges of Agriculture and Home Economics, is the oldest continuous organization on the Cornell campus. Starting as a debating club in 1891 by Liberty Hyde Bailey, it became the Ag-Association in 1900. The Association sponsored social events, supported athletic teams, was instrumental in forming an honor system on the Ag campus, and founded the Cornell Countryman. In 1929 the newly-formed Home Economics College spurred another change—to the present Ag-Domecon Council—to unite the interests of all Upper Campus students.

Today an active Ag-Domecon Council represents and serves student interests, coordinates student activities, and promotes better student-faculty relations. Some of its current functions are: participation in Sub Frosh Weekend and Cornell Day, the coffee hour, the Professor of Merit Award, student opinion polls, and the Swedish Exchange Program. The council also sponsors student-faculty dinners, and represents the colleges on the University Student Executive Board.

The purpose of the Agronomy Club is to further interest in soil science by educational and social means. The club has one meeting a month, usually alternating between social meetings and lectures. Lectures are given by prominent men in the field of agronomy from both educational institutions and industry. An informal discussion follows each lecture and refreshments are served. The social meetings are informal, and give students a chance to meet each other and their professors in a relaxed atmosphere.

The club has been active in such events as inter-collegiate soil judging contests. Anyone interested in agronomy is eligible for membership.

The purpose of the Cornell Conservation Club is to present the many phases of conservation to all those attending its meetings and other activities. The club enhances the relations of students to wildlife, fish, forests, other students, and professors.

The club is composed mainly of conservation students but all students interested in the field of conservation are invited to become members.

Each meeting, which has a guest lecturer or movie, is designed to acquaint the participants with some aspect of conservation which is of interest to them. Other activities have included hunting trips, forestry projects, smelting trips, Christmas tree sales, displays at Agricultural Progress Days, ornithology films, and game dinners. The most recent game dinner included deer, smelt, rabbit, and ducks taken by the club members.

Dr. Harlan Brumsted, club advisor, will discuss the club and its activities with any student who wishes to obtain more information. Meetings are held in Furnow 122 every two weeks at 7:30.

Cornellians interested in the amateur or commercial aspects of gardening, landscaping, nursery management and flower arranging are invited to become members of the Floriculture Club. Once a month the members meet to see demonstrations and hear speakers in the fields of floriculture and ornamental horticulture.

The Mum Ball, first semi-formal campus-wide event in the fall, is sponsored by the club. It has been a rewarding experience for the members who have worked on it and a pleasure for those who attend.

Come and get acquainted. Meetings are announced in the Sun and posted on the bulletin board in the basement of Plant Science Building.

Cornell 4-H Extension Club is a social and service club open to any Cornell University student. It strives to develop and maintain an interest in rural life while providing an educational and social life for the student.

The recreation team, the club's most prominent committee, holds monthly square dances on campus and at 4-H clubs in the surrounding area. This spring the club is having a sub-frosh weekend to acquaint interested high school 4-H'ers with university and college life. This program was held for the first time last year.

The club meets the second and fourth Wednesdays of each month at 7:30 p.m. in the Warren Student Lounge.
Cornell Grange is a unique organization, being both a student association and a regular subordinate Grange. Its membership includes students and faculty from all parts of the University, and membership is usually continuous for students following graduation.

The benefits of the Grange include fellowship, education, recreation, and leadership training. Monthly meetings are held on the first and third Tuesdays at 7:30 p.m. in the Warren Hall Student Lounge. Activities of the organization include trips to the State and National Grange Conventions, attendance at the National Student Grange Conference, and a special meeting during Agricultural Progress Days.

Better understanding of the engineering profession is the object of the Cornell Student Branch of the American Society of Agricultural Engineers.

Composed of agricultural engineering majors, the club holds monthly meetings in Riley-Robb Hall. Activities in the past have included tours of farm machinery factories, Agricultural Progress Days exhibits, and an annual banquet. Speakers ranking high in the field of agricultural engineering are featured at club meetings. Ag engineering majors and other students are welcome at the meetings.

With the continual expansion of the field of home economics, the Cornell Home Economics Club has grown larger each year. A varied program is offered, featuring symposia and demonstrations to interest majors in all fields of home economics.

Past activities have included a bridal fashion show, a foreign student symposium, and student-faculty functions.

The club also sponsors a coffee hour each weekday morning in the Warren Hall Student Lounge. The receipts are used to sponsor scholarships for worthy students in the College of Home Economics.

Students interested in livestock and animal husbandry find practical experience and pleasure in the Cornell Roundup Club. The organization, which meets monthly in Morrison Hall, is devoted to establishing interest in livestock and livestock activities.

The most prominent activity of the club is the annual Little International Livestock Show. Students compete for trophies, awards, and honors in the fitting and showing of livestock.

Along with the raucous Fall Roundup, the club sponsors several social events during the college year.

Cornell Association of Teachers of Agriculture ("CATA") is a campus organization composed of prospective agriculture teachers. The club is designed to acquaint its members with the field of teaching agriculture.

CATA is primarily a professional organization and its program includes guest speakers from the fields of agriculture and education, field trips to various high school agriculture departments, and an annual panel discussion by seniors who have returned from student teaching. The social activities of CATA include several parties and picnics during the academic year.

Anyone interested in CATA is cordially invited to attend meetings of the organization, which are held every first and third Thursday in the Stone Hall Conference Room at 7:30 p.m.

Cornell Pomology Club is organized to further interest in the field of pomology. It is made up of pomology majors and anyone interested in this field of agriculture. Monthly meetings are held at which informative speakers present new developments in pomology.

The apple vending machine in Plant Science Building has been owned and operated by the Pomology Club for the past eleven years. A new machine was installed last fall. With the profits derived from apple selling, the club sponsors a scholarship. In the last three years the club has also contributed one half of the money for the Swedish Exchange Scholarship.

On the social side, the club sponsors a Christmas banquet and, in the spring, a chicken barbecue for club members and the pomology department staff.

Cornell Poultry Club is a member of the National Collegiate Poultry Club. Its purpose is to foster fellowship among students and faculty of the Department of Poultry Husbandry. Membership is open to all students of Cornell who are interested in poultry. Regular meetings are held on the second Thursday of every month.

Club activities include fall and spring student-faculty picnics, exhibits during Activities Fair, an educational trip in the spring, and the annual sale of barbequed chicken during Agricultural Progress Days. A social event for club membership is held during the spring term, and a team annually represents the Poultry Club at the Eastern Intercollegiate Poultry Judging Contest. In addition, the club makes an annual award of a $300 scholarship to an incoming freshman, and contributes to the Argentina Exchange Program fund.

Pre-Vet Club attempts to give its members an idea of the many varied fields of veterinary medicine which are open to them. The speakers, usually professors from the veterinary college, illustrate through lectures and demonstrations—including anything from brain-stem fowl to the head of a rabid fox—the work being done in their respective fields.

The meetings of the club are held bimonthly at the Veterinary College and anyone is welcome. Membership is not limited to pre-vets, but is open to any students who have an interest in veterinary medicine or related fields.

Students vie for awards in the Roundup Club's annual Little International Livestock Show.

Cornell Pomology Club is organized to further interest in the field of pomology. It is made up of pomology majors and anyone interested in this field of agriculture. Monthly meetings are held at which informative speakers present new developments in pomology.

The apple vending machine in Plant Science Building has been owned and operated by the Pomology Club for the past eleven years. A new machine was installed last fall. With the profits derived from apple selling, the club sponsors a scholarship. In the last three years the club has also contributed one half of the money for the Swedish Exchange Scholarship.

On the social side, the club sponsors a Christmas banquet and, in the spring, a chicken barbecue for club members and the pomology department staff.

Cornell Poultry Club is a member of the National Collegiate Poultry Club. Its purpose is to foster fellowship among students and faculty of the Department of Poultry Husbandry. Membership is open to all students of Cornell who are interested in poultry. Regular meetings are held on the second Thursday of every month.

Club activities include fall and spring student-faculty picnics, exhibits during Activities Fair, an educational trip in the spring, and the annual sale of barbequed chicken during Agricultural Progress Days. A social event for club membership is held during the spring term, and a team annually represents the Poultry Club at the Eastern Intercollegiate Poultry Judging Contest. In addition, the club makes an annual award of a $300 scholarship to an incoming freshman, and contributes to the Argentina Exchange Program fund.

Pre-Vet Club attempts to give its members an idea of the many varied fields of veterinary medicine which are open to them. The speakers, usually professors from the veterinary college, illustrate through lectures and demonstrations—including anything from brain-stem fowl to the head of a rabid fox—the work being done in their respective fields.

The meetings of the club are held bimonthly at the Veterinary College and anyone is welcome. Membership is not limited to pre-vets, but is open to any students who have an interest in veterinary medicine or related fields.
Over the years the College of Agriculture has developed into what almost could be called a university within a university. The diversity of the agricultural curriculum has been expanded each year, and a variety of students has been attracted, with interests more varied than the curriculum.

The incoming Class of 1966 is no exception. Students have enrolled from all parts of the state, the nation, and the world. They are majoring in the agricultural, biological and social sciences, each with his particular career plans in mind and each a new part of this heterogenous place called Cornell.

As a service to both the alumni and students of the College, the Alumni Association presents brief sketches of several of the incoming students, to concretely demonstrate the wide diversity and high quality of the Class of '66.

Ag Engineering
Enrolled in the five-year professional agricultural engineering curriculum is Gerald Call, of Stafford, a small town near Batavia in Genesee County. He was brought up on a farm operated by his father, a Cornell alumnus. He is a sports enthusiast and is trying for a spot on the Cornell Crew. He is in the Air Force ROTC program.

Bacteriology
The daughter of an alumnus and holder of a New York State Regents Scholarship, Jean Pechuman is majoring in bacteriology in the College of Agriculture. She is active in student government and athletics during high school. Her home is in Lockport. She hopes to go on to graduate work and obtain a position in bacteriological research.

Foreign Service
John Cobey hails from Galton, Ohio, and is enrolled in the College's new foreign service program. He was active in high school athletics and is trying for a position on the Cornell soccer squad. He has always been interested in agricultural work and showed livestock at county fairs in Ohio during high school.

Pre-Veterinary
One of the many undergraduates hoping for admission to the College of Veterinary Medicine, Richard Fleming is majoring in the pre-vet dairy farming program. His home is in Hudson, Columbia County. He is a member of the trumpet section of the Cornell Big Red Band.

Biological Science
A biological science major from Jamaica, N.Y., David Feigen hopes to go into biological or bacteriological research after graduation. He is also a member of the Big Red Band's trumpet section. He is an amateur radio operator and took part in the Westinghouse Science Contest while in high school.

Pre-Ministerial
One of the several transfer students entering the College this fall is Wade Nye, who is doing pre-ministerial work in the department of rural sociology. A native of Monroe County, he entered the Air Force following graduation from high school. He was sent to Yale University where he studied Chinese for eight months, after which he did secret work for the Air Force on Formosa for 15 months. He was then sent to Beckley College, where he worked in the Air Force Recruiting Office. Following three years of study at Cornell, he hopes to attend seminary and then do missionary work in Formosa, the Philippines, or Indonesia. His main interests are music, dramatics, and international affairs.
13 Professors Retire

Thirteen retirements and four deaths among members of the Upper Campus faculties were recorded over the summer months. Ten professors retired from the College of Agriculture and three from the College of Home Economics. Those who died included two research professors, an extension professor, and a former director of resident instruction in the College of Agriculture.

M. C. Bond

Maurice C. Bond, director of extension in the Colleges of Agriculture and Home Economics since 1954 and professor of marketing, retired July 1. Largely responsible for the successful reorganization of the local extension groups, Dr. Bond also guided the Extension Service into many new fields of adult and youth education. He has been succeeded by Alvin A. Johnson, professor of plant breeding in the College of Agriculture and a longtime veteran of extension work. A native of Minnesota, Director Johnson has participated in programs of aid to Greece and India.

An internationally known nutritionist and gerontologist, Clive M. McCay, has retired from the department of animal husbandry. A native of Indiana, Dr. McCay studied at University of Illinois, University of California, Iowa State and Yale University before coming to Cornell in 1927. He has done extensive research in dog nutrition and has written more than 150 technical papers, along with one book.

L. Leola Cooper, professor and extension specialist in the department of household economics and management in the College of Home Economics, has also retired from the staff. An expert in management and kitchen planning, she has worked in Ceylon, India and the Phillipines as an extension consultant.

A noted specialist on tree diseases and professor of plant pathology, Donald S. Welch has retired after more than 40 years of service to Cornell. Dr. Welch studied at the University of Maine and Harvard, earning his Ph.D. at Cornell in 1925. He is known for his extensive research into the causes of the Dutch Elm disease.

Arthur J. Pratt, professor of vegetable crops, was honored with the 1961-62 Professor of Merit Award before his retirement July 1. Dr. Pratt was well known on the Upper Campus for his course in general horticulture, the first of its kind since the days of Dean Liberty Hyde Bailey. He is the author of many articles and bulletins, in addition to the book, Gardening Made Easy.

A member of the economics departments of both the Colleges of Agriculture and Arts and Sciences, M. Slade Kendrick retired July 1 after more than 35 years on the faculty. Dr. Kendrick specializes in public finance and taxation and his taxation course was taken by students from all colleges of the University.

Alice M. Bryan, professor of nutrition of the College of Home Economics and the Graduate School of Nutrition, retired June 30. A native of England, she has done extensive research in food preparation and vitamin retention. She is the author of several extension bulletins and scientific papers.

Professor in the department of rural sociology and expert in community development, Howard E. Thomas announced his retirement after 14 years in the Cornell community. He has served as a foreign missionary and worked on extension projects in Greece, Lebanon, and Syria. Dr. Thomas will devote the next two years to a project in Laos for the Agency for International Development.

Joining her husband on the Laotian project is Ruth H. Thomas, who retired from the faculty after 11 years as extension specialist in the department of child development and family relationships of the College of Home Economics. Mrs. Thomas earned her M.S. and Ph.D. degrees at Cornell and has done medical and educational work in Southeast Asia.

A native of Budapest, Hungary, Zoltan I. Kertesz retired from the faculty after serving for 22 years as professor of chemistry in the department of food technology at the Geneva Experiment Station. Dr. Kertesz earned his Ph.D. at the University of Tisza, Hungary, in 1927. He is now working with the FAO in Rome, Italy.

A well known associate professor of freehand drawing in the department of floriculture and ornamental horticulture since 1946, Elisabeth L. Burckweyer retired from the faculty during the summer. She formerly was a high school biology teacher and il-
Illustrated many extension bulletins and articles while at the University.

One of the world's foremost authority on the iris, Lowell F. Randolph, announced his retirement as professor of botany. He has toured considerably behind the Iron Curtain and lectured at Russia's Komarov Botanical Institute in 1959. Dr. Randolph plans to continue his research work at the University.

Henry Dietrich, associate professor of entomology and curator of the University Insect Collection, retired from the faculty July 1 after 29 years of service. A native of Germany, Dr. Dietrich earned both his B.S. and Ph.D. degrees at the University. His work has centered around insect classification.

A well-known member of the Cornell community for many years and former Dean of the Faculty, Cornelius Betten, died August 23 at the age of 84. He was professor of entomology before becoming secretary of the College of Agriculture in 1915. In 1920, he was named director of resident instruction, a post which he held until 1940. He was Dean of the University Faculty from 1932 to 1945.

Otto A. Reinking, professor of plant pathology emeritus, died June 1 in Washington. He was an expert in the field of tropical plant diseases and served as head of the department of plant pathology at the Geneva Experiment Station from 1936 to 1950.

An extension professor well known to many fruit growers in the state died September 14, W. D. Mills, extension professor of plant pathology, traveled throughout the state studying various fruit diseases and giving advice to fruit farmers. He earned his B.S. degree at Michigan State and was awarded the Ph.D. degree at Cornell.

 Howe S. Cunningham, professor emeritus of plant pathology, died this summer. A native of Nova Scotia, he studied at McGill University and Cornell. His work was directed at plant disease research at the Geneva and Riverhead Experiment Stations. He was given emeritus status on the faculty in 1952.

---

**Letter from Argentina**

(Following are excerpts from a letter from George F. Patrick, a junior in the College of Agriculture who is studying for a year at the University of Buenos Aires, Argentina. In return, Cornell is host to Carlos Luaces, an Argentine student studying animal nutrition in the College of Agriculture. Carlos is spending his first term as guest of Alpha Zeta, and will live at Alpha Gamma Rho during the spring term.—Ed.)

Dear Friends,

After a term's work here in Argentina I feel that I am in a better position to tell you something about the Facultad and the students.

The Facultad de Agronomía y Veterinaria has about 1,200 students and about 300 employees. The student body is about evenly divided between the two schools. Five years of work are required in the Facultad before the student receives his degree. Some of the students complete their work in less time, but many of them work and take six or seven years to finish.

The setup of the course of study is very different from the system at Cornell. There are forty-two courses taught in Agronomía and the students must take thirty-four required courses and at least three elective courses. The required courses cover as much as possible of agriculture, the natural sciences, and economics. Most of the courses introduce the student to the field and some of them go into much more detail than would be expected from the program. However, the students lack the opportunity to go deeply into any particular part of agriculture. It is a very general program designed to train the student in the fundamentals of agriculture and give him a foundation for further study. At the present time many of the students feel that the program is too general and would like to be able to specialize somewhat more.

To me the biggest difference between Cornell and the Facultad is in the method of giving tests. During the term there are about two tests of much the same form as the prelims at Cornell. However, these tests are not used in determining the student's final grade. It all rests on his final examination. At the beginning of the term the professor makes up a program of the course and twenty to thirty general final examinations. At the end of the term two dates are given that the student may take the examinations. On the day of the exam, the professor, the laboratory instructor, and another professor of a related course make up the examining table. Before taking the exam he draws two numbered balls and chooses one. The number of which corresponds to questions he would prefer to answer. After selecting the question, in which luck plays a major factor, he is given time to prepare his answer. When it's his turn he tells the professors what question he is going to answer. The professors may interrupt him to clarify a point or to question him more fully. After he has finished with his prepared answer, or at any time, he may be asked questions about anything covered in the course.

With a good group of professors and a student who has studied well, the exams go rapidly. However, if the student has not studied, one of two things may happen. If the professor feels that the student actually knows the material he may be questioned for an hour or more. However, the professor may dismiss the student if he feels like it and the student has not made a good impression on him during the year. The Dean of the Facultad holds the record for the shortest exam, about thirty seconds.

I strongly urge all freshmen to think about applying for the exchange program. It is a great opportunity and very enjoyable.

Yours truly,

George F. Patrick

---

Cornell Countryman
bothered by

CLASS STRUGGLE?

Solve Your Academic Needs at the

TRIANGLE BOOK SHOP
in Collegetown

"If I hadn't bought this old house before those NYABC-sired cows started producing, I don't know where I'd have kept all the milk."

New York Artificial Breeders' Cooperative
Ithaca, N.Y.

Your Headquarters for Superior AI Proved Sires

LOOKING FOR THE FINEST IN PRINT?

You'll find it at—

NORTON PRINTING CO.

317 E. State St.
Ithaca AR 2-7800
"Printers of the Cornell Countryman"

Country Gentleman

BUY ALL YOUR NEEDS AT THE CAMPUS STORE

Barnes Hall
Ithaca, N.Y.
President Deane W. Malott affirmed the importance of home economics in our society when he said, "In the face of transition, the family remains, as it must, the foundation upon which our individual character and therefore our society is based."

Nor can the international importance of home economics be overemphasized. Of all the subject matter areas in North American colleges, home economics is uniquely qualified to make a highly significant impact on the physical and emotional health in any society. Home economics stands alone in its concern for the total well-being of the family and the individual. Due to the rapid social, economical, political, and technological changes taking place in many parts of the world, there is an urgent need for home economics subject matter in both formal and informal educational programs.

As a special institution, founded and maintained for the purpose of furthering knowledge in the area of human development, the New York State College of Home Economics at Cornell University is making a highly significant contribution, not only to the family, but through it to the Nation and the world.

Helen G. Canoyer

No. 1 in a series from the New York State College of Home Economics, a unit of the State University, at Cornell University, Ithaca, N. Y.
The New York State College of Home Economics at Cornell provides an education based on rigorous study of the sciences, humanities, and arts vital to service in the public interest. It offers a unique and integrated study of human development because it is concerned with the utilization of human and material resources within the family, and with physical, social, psychological, and economic forces that affect the family and thus the community, the State, and the Nation. For many years this College has conferred the largest number of master's degrees (with thesis), and doctor's degrees, of any state-supported home economics school or college in the United States.


The State College of Home Economics at Cornell University is a professional college noted for the quality of its students, its research, and its Cooperative Extension Service program in home economics.

Helen G. Canoyer, Dean
Toward One World

Through the miraculous coincidence of the Protestant work ethic and a land rich with natural resources, America has developed into the most prosperous nation in the history of the world. A particular American way of life has developed simultaneously. These factors have combined to give Americans the feeling that they have found The Road to Happiness and Fulfillment and that the rest of the world is in darkness, with the possible exception of Western Europe.

The first expression of this feeling was the great missionary drive conducted during the 19th century to dress native heathens in pants and Mother Hubbards and teach them to read the Bible. This resulted in the random destruction of ways of life that had existed for centuries, but the Missionaries of the Right Way carried on with ever increasing zeal.

At about the same time, the field of social science known as anthropology was developing. One of the major results of anthropological work was the theory of cultural relativity, the principle that no culture is “right,” that each attribute of a culture must be judged within the context of that culture. A vigorous condemnation of missionary work resulted.

Logically speaking, the theory of cultural relativity and the refutation of missionary work is acceptable. But this can hardly be adopted as a policy regarding foreign work because of one factor. That factor is the highly developed modes of communication that exist in the world today. No culture can stay outside the world market and the world community and survive. A short mental review of current events will develop this point for the reader.

Thus we must work toward a universal culture. There is no other way out, for isolationism cannot be fitted into the modern scheme. The world must be Westernized. Not that this is “good,” but it is rather the consequence of a myriad of random events.

A comfortable solution to solving the problem of innovating the Western way of life into other cultures has been found in planned change. Planned change, in essence, is the slow innovation of a different way of life in a foreign culture, with each new cultural aspect being fitted to the people’s traditional patterns. The democratic aspects of the program develop the feeling among the native people that they are innovating the change themselves.

Planned change was not developed to clear the American conscience. It is one of the few foreign programs with a primary goal of helping others, rather than the subtle motive of preserving ourselves. It may be the key to the one world men have sought for centuries. With the merging of values and ideals, there will be no need for antagonism, but rather a common need for continued development.

---

CORNELL COUNTRYMAN

Vol. LX November, 1962 No. 2

In This Issue

Editorial .................................................. 1
Culmination of Cooperation ............................. 2
Letter to the Editors ..................................... 5
A Better Life for Africa ................................. 7
International Home Economics ......................... 8
IFYE: Friendship Around the World .................. 10
Walnuts, Yugoslavia and Cornell ......................... 12
An Exchange of Ideas .................................... 14
Cornell in Liberia ....................................... 15
Alumni Association ..................................... 16

---

The Cornell Countryman is published monthly from October through May by students in the New York State Colleges of Agriculture and Home Economics, 490 Roberts Hall, Cornell University, Ithaca, New York. Second-class postage paid at Ithaca, New York. Printing by Norton Printing Co. of Ithaca. Subscription rate is $1.75 a year or two years for $3.25; three years for $4.50; single copies, 25 cents. A member of Agriculture College Magazines Associated. Represented for national advertising by Littell-Murray-Barnhill, Inc., 369 Lexington Avenue, New York 17, N.Y.

---

November 1962
After the war a great college was left in ruins.

Today, after international cooperation, the University is a modern educational center.

Culmination of Cooperation

by Steven Reinheimer

THE College of Agriculture of the University of the Philippines, Los Banos, 1945: Where a few years before the campus was alive with students, their minds engrossed with studies, their thoughts on youthful aspirations—there now was desolation. Where tall tropical trees once shielded students from the torrid sun, now only stumps remained, or a lone tree—miraculously spared from the bombs and fire of The Great War. Slabs of concrete and brick, rubble overgrown by the encroaching jungle, and a few small buildings were all that remained of a great College of Agriculture. A superior herd of cattle adapted to the local climate was destroyed by the retreating armies, a tragic culmination of thirty-six years of selective breeding.

These were the remains of a college that welcomed the small group of Filipino professors and students returning to Los Banos in 1945. Some believed that the damage was too complete and the devastation beyond repair. Others were more optimistic, including the dean of the college, L. B. Uichanco. They determined to rebuild it to its pre-war greatness and make it a center for agricultural research and teaching in Southeast Asia.

Rebuilding moves slowly

During the immediate post war years the teaching staff was small, for the war had taken its toll. In addition low salaries forced many of those who survived to find jobs elsewhere. The few existing classrooms were desperately overcrowded. Through dedicated efforts the rebuilding progressed, but at a slow rate. Realizing the need for outside assistance, the Philippine and United States governments agreed on a broad program of technical assistance to the college.

In 1952 the International Cooperation Administration (a department of the federal government which administers mutual aid programs) and the University of the Philippines drew up a contract with the objective of aiding the redevelopment of the Philippine agricultural economy. Major steps toward meeting this goal would be achieved by rebuilding the physical plant and strengthening the quality of research and instruction at the Los Banos College of Agriculture. This contract was continued through extension or renewal until June, 1960.

The American government selected Cornell's College of Agriculture to enter into a cooperative agreement with the College of Agriculture at Los Banos. Cornell, by its own desires, undertook the obligation of supplying the college with its own faculty members wherever feasible. The staff at Cornell eagerly awaited the challenging opportunity to participate in the program.
Agricultural research and experimentation result in a strong economy.

Dean William I. Myers and his successor, Dean Charles E. Palm, personally selected the individuals whom they felt could best contribute to the project. In all, 35 highly qualified professors were sent overseas from Cornell.

Resettling in an area 10,000 miles from Ithaca is not an easy adjustment, especially when whole families are involved. Imagine moving from a country with the highest standing of living to a war-ravaged country a world away and a culture apart. Fortunately, Filipino-American relations were excellent. Dr. Nyle C. Brady, head of the department of agronomy at Cornell, said that the families of the Cornell faculty members were indispensable to the success of the venture. Americans lived side by side with their Filipino counterparts. American children went to school with Filipino children. Cornell professors did not act the part of advisors or experts in their particular fields. Rather it was a truly cooperative effort.

To enhance this spirit of cooperation, each Cornell professor worked with a Filipino professor in his field. By this method, each Filipino faculty member was provided with the latest information in his field or specialization. In this way American professors helped develop programs in the various departments.

Animal science developed

The development of the department of animal husbandry is a typical example of what was accomplished with Cornell assistance. Between 1953 and 1958, four visiting professors from Cornell's Department of Animal Husbandry traveled to Los Banos. Professor J. K. Loosli helped increase and modernize the facilities. Research projects were initiated under his assistance. Due to the critical shortage of teachers, Prof. Kenneth Turk taught one of the courses and gave numerous other lectures. He also assisted in the direction of the feeding and nutrition projects. Much of Prof. George Trimberger's time was occupied in acting as project leader. Under his direction the artificial insemination program was developed; frozen semen was shipped from American sires to upgrade cows on the islands. Prof. R. W. Spalding completed the development of the artificial insemination program and helped to establish a breeding center. As a result of the combined efforts of the Cornell-Los Banos team, the College of Agriculture at the University of the Philippines became a center for developing superior livestock in Southeast Asia.

It is interesting to note that there is a department of home technology at the college. Compared with other home cc. departments, the one at Los Banos is unique. Rather than turning out professional specialists, its goal is to develop a woman "who can stand alone in a rural setting and teach authoritatively all the important areas of family living."

A factor which gave Cornell professors added encouragement was the students' great eagerness to learn. Commencing with an enrollment of 119 in July 1945, the figure reached an incredible peak of 4,107 by 1955. This number would have been still larger had facilities permitted it. Although buildings were being erected at a hectic pace, they could not accommodate the student population. A classroom seat was a luxury; many students lined the walls during classes, with others propping themselves upon window sills. There was no need to make attendance compulsory.

Filipinos come to Cornell

In relation to the number of students at the College of Agriculture, the teaching staff was grossly inadequate. To provide a solution to this serious problem, young faculty members and students were sent to Cornell's College of Agriculture for training. The great desire of students to come to the United States offered an effective incentive for superior achievement. Several of the best graduates from Los Banos were sent each year to the States with financial aid provided by ICA and organizations such as the Rockefeller Foundation.

The practice of sending the best students to Cornell had certain advantages, including the experience of living in a highly developed economy and in a completely different culture. However, since the climate, the agricultural products and the basic economy of the United States are, in most instances, unlike that of Southeast Asia, much of the American instruction...
Dean L. B. Uichanco of the University of the Philippines shakes hands with former Dean W. I. Myers during a visit here in 1955. The effort was and is being made to help improve Philippine agriculture and consequently its economy.

Plant breeders have provided Philippine farmers with new improved and hybrid seed varieties. This has helped increase crop yields in many areas. The Philippine Islands are endowed with vast areas of grasslands which have enormous production potential. Improved varieties of grass have been developed which can thrive in the local climate. On many stretches of land the carrying capacity has greatly increased. Closely related to this effort was the need to develop and introduce superior grades of cattle. Artificial insemination was established on a permanent basis.

Professors did not begrudge their assistance to the Filipinos. They acted with a sense of humility and respect, not as Big Brothers but as Good Neighbors.

Research strengthens economy

How did the Cornell-Los Banos project help regenerate the economy of the Philippines? Agriculture is the country’s base. The key to strengthening it is research. At the College of Agriculture a many sided effort was and is being made to help improve Philippine agriculture and consequently its economy.

Research strengthens economy

How did the Cornell-Los Banos project help regenerate the economy of the Philippines? Agriculture is the country’s base. The key to strengthening it is research. At the College of Agriculture a many sided effort was and is being made to help improve Philippine agriculture and consequently its economy.

Plant breeders have provided Philippine farmers with new improved and hybrid seed varieties. This has helped increase crop yields in many areas. The Philippine Islands are endowed with vast areas of grasslands which have enormous production potential. Improved varieties of grass have been developed which can thrive in the local climate. On many stretches of land the carrying capacity has greatly increased. Closely related to this effort was the need to develop and introduce superior grades of cattle. Artificial insemination was established on a permanent basis.

Professors did not begrudge their assistance to the Filipinos. They acted with a sense of humility and respect, not as Big Brothers but as Good Neighbors.

New program slated

Dean Palm recently stated: “Currently the Cornell College of Agriculture is studying the possibility of a new opportunity for work with this college in the Philippines which could be cooperative with that institution, the Ford and Rockefeller Foundations, and government agencies of both countries. Its purpose would be to strengthen the teaching, research, and extension programs, and to develop a graduate-training center for agriculture in the Philippines. It would serve a broader sphere of influence, since the college at Los Banos is attracting increasing numbers of students from other countries in southeast Asia.”

Let us hope that the relations characterizing the Cornell-Los Banos project will increasingly typify American humanitarian efforts the world over.

**at the CORNERS...**

or in COLLEGETOWN...

**HILL DRUG**

*can fill your prescription*

**TWO FREE DELIVERIES DAILY**

408 College Avenue  
Phone AR 3-6596  
Corners Shopping Center  
Phone AR 3-0811
Active Students Improve Image

To the Editors:

When I began study in the College of Agriculture, I was under the impression that of all the colleges at Cornell, this was the most outstanding. Instead, I found that many students in other schools look down at the agriculture students. At first I was up in arms over these remarks, reminding the students that agriculture was one of the foundations of Cornell. Now, entering my junior year, I realize who is really to blame.

Yes, it may be hard to believe, but it is the students in the College of Agriculture who are at fault. How can others respect us when we do not carry esteem for our school ourselves? There are few contributions from the ag campus in the Cornell Sun and other campus publications. We rarely sponsor public lectures, depriving other students of the opportunity to share in the challenging problems of the nation's food production. The other students have no reason to show us respect—we haven't earned it!

I urge students in the College to correct this by first becoming active in the student organizations that the College offers. Among them are Ag-Domecon Council, Agronomy Club, Ag Engineering Club, Cornell Association of Teachers of Agriculture, Cornell Conservation Club, Cornell Countryman, Cornell Pomology Club, Cornell Poultry Science Club, Pre-Vet Society, 4-H Extension Club, Cornell Grange, Dairy Science Club, Floriculture Club, Jordani, Round-Up Club, and Vegetable Clubs Club.

Upon strengthening these clubs, we will be ready to unite the Upper Campus. Each club will contribute to the Ag-Domecon Council and a stronger upper campus student council will result. Then we can publish writings in University publications and sponsor lectures and other activities. In this way we will be able to bring the College of Agriculture to every student in the University, sharing with them the field that is the backbone of the nation and something we can be proud to be a part of.

Let's be active this year, remembering that this activity will strengthen the College. Each of us has the responsibility to participate.

Gary Hyman, President
Cornell Round-Up Club
A short talk
about a lifetime career
by Jim Bryce

"Here in the research department of American Oil you're given an opportunity to work in many phases of petroleum engineering. As a design-economics engineer, I'm investigating the incentives for proposed new technical ventures. These projects provide a good background for greater research department responsibilities and/or for opportunities in marketing, production, or general management."

Jim Bryce has a lot going for him: a Bachelor of Chemical Engineering degree from Cornell, an excellent start on his Masters degree in Business Administration in Finance at Northwestern, and a solid career opportunity at American Oil. Right now, Jim's MBA work at Northwestern is being paid for (75%) by American Oil on their Advanced Education Plan.

Scores of ambitious and talented young men like Jim Bryce have been attracted to American Oil because of the wide range of research opportunities offered. American Oil is particularly interested in: Chemists—analytical, electrochemical, inorganic, physical, polymer, organic, and agricultural; Engineers—chemical, mechanical, metallurgical, and plastics; Masters in Business Administration with an engineering (preferably chemical) or science background; Mathematicians; Physicists.

For further information about a challenging career for you in the Research and Development Department of American Oil Company, write to: D. G. Schroeter, American Oil Company, P. O. Box 431, Whiting, Indiana.

IN ADDITION TO FAR-REACHING PROGRAMS INVOLVING FUELS, LUBRICANTS AND PETROCHEMICALS, AMERICAN OIL AND ITS AFFILIATE, AMOCO CHEMICALS, ARE ENGAGED IN SUCH DIVERSIFIED RESEARCH AND DEVELOPMENT PROJECTS AS:

- New and unusual polymers and plastics
- Organic ions under electron impact
- Radiation-induced reactions
- Physicochemical nature of catalysts
- Fuel cells
- Novel separations by gas chromatography
- Application of computers to complex technical problems
- Synthesis and potential applications for aromatic acids
- Combustion phenomena
- Solid propellants for use with missiles
- Design and economics
- New uses for present products, new products, new processes
- Corrosion mechanisms
- Development of new types of surface coatings.
DOMESTIC Science can play an important role in raising the standard of living in the new rapidly developing countries, and therefore much emphasis should be placed on this study,” stated Lenora Moragne after spending twelve weeks in West Africa this summer. Miss Moragne, assistant professor of institution management in the Cornell College of Home Economics, visited Liberia, Guinea, Sierra Leone, Ghana and Nigeria during the summer to observe the teaching of domestic science to young women and girls and to observe quantity food service operations in hospitals, school dormitories, restaurants and other institutions.

In a recent report to the Home Economics Faculty and Staff, Miss Moragne reported on her observations of domestic science education in the former British colonies of Sierra Leone, Ghana and Nigeria. She found domestic science subjects being taught on many levels, including primary school, middle or secondary school, the university, technical institutes, and teacher training institutions.

Domestic science in the form of needlework and handicraft is taught in the primary grades, many times to boys and girls alike. At the higher levels subjects such as needlecraft, cookery, housecraft, laundry, and “mothercraft” are offered. “The teachers of these subjects revealed that favorite courses are cookery, mothercraft, and needlework; the least liked being housecraft and laundry,” admitted Miss Moragne.

The University of Nigeria at Nsukka offers a degree in home economics with majors in food and nutrition, textiles and clothing, and teaching. Technical institutes and women’s training centers offering 2 year courses provide facilities for trade training in needlework, dressmaking, embroidery and for housekeeping or institution matron positions. The teacher training college courses in domestic science deal principally with the techniques and methods of carrying out the primary and middle school domestic science curricula.

The lack of textbooks in domestic science of African origin accounts for the pattern of teaching subjects in West Africa. Topics are generally introduced to the students through demonstrations by the teacher and this is followed by classroom performances by the pupils. A blackboard summary concludes most lessons. Extensive note taking is practical and necessary due to the lack of adequate texts, with the result that students often “write their own books.” Miss Moragne noted throughout her travels that the emphasis in most domestic teaching is on the practical rather than the theoretical.

After observing many schools in these countries, Miss Moragne became aware of some of the problems facing domestic science education in West Africa. The main difficulty is the lack of sufficient funds to expedite and maintain domestic science education at the level which it is aimed.

“The lack of adequately trained teachers and leaders in the field was also evident. Many of the domestic science teachers themselves recognized the need to revamp the objectives of the domestic science program in order to meet the interests and needs of the students and the economy of the country,” noted Miss Moragne.

After spending an enjoyable and educational summer in West Africa, Miss Moragne would like to pay a return visit sometime in the future. Summarizing her feelings about domestic science education in these countries, she stated that “a great deal is being accomplished, but there is a great deal to be accomplished, and the gap is wide.”
We have become increasingly interested in and concerned about the effectiveness of graduate education in home economics for students from other countries,” reported Dean Helen Canoyer in the “Thirty-Fourth Annual Report of the New York State College of Home Economics at Cornell” in 1959. Since 1959, the scope of the college’s interest in the international phases of home economics has widened and deepened, and at present the possibilities of undertaking a college-sponsored project in home economics in Ghana in connection with that country’s Ministry of Education is being investigated.

The college does not presently have an organized program of projects or aid to foreign countries. However, there is a wide range of activities and opportunities in the international field for students and faculty of the college as well as for foreign students and educators.

Recent data gathered by the College reports the following statistics on International Home Economists To and From Cornell:

Alumnae now in other countries:
- United States citizens 92
- Others 102

Educators from other countries 147

Delegates to international meetings at Cornell 31
Faculty on missions to other countries 22
Faculty on independent travel and study 5

Foreign students:
- Post-graduate 45
- Special students 6
- Currently enrolled students 30

These figures mean much more than just numbers of people who have traveled to and from Cornell. They represent educational and cultural experiences for hundreds of students and faculty here at Cornell that have resulted in educational experiences for thousands in the countries of the foreign students—and all of these experiences are in home economics or related closely to it. This home economics education is improving the lives and health of families and societies throughout the world.

Cassava, a staple food in Nigeria, has been supplemented by important proteins due to the work of Dr. Hazel Hauck.

Cultural studies have long been used to further our understanding of similarities among cultures and among individuals shaped by those cultures. One such study will be carried out by the college under a National Science Foundation grant. Personality and behavior differences among children in three cultures, due to differences in child rearing, will be analyzed in this four year study by Profs. Ulric Bronfenbrenner, Edward C. Devereux Jr., and George J. Suci. They will conduct the study in the United States, Switzerland, and Russia. This and similar studies help to expand our knowledge about foreign cultures and peoples.

Another great learning experience about people from other countries is known by all who come in contact with the many foreign students at Cornell. In the classroom, these students are often called upon to relate their experiences or details of life in their own culture. Outside of class, many of us have benefited from discussions with foreign students and social gatherings when foreign students are present.

Furthermore, and possibly much more important, is the knowledge these students gain about our culture and the professional training they receive as students. Many foreign students are doing post-graduate work and upon return to their own countries will become leaders in the development of better health and better living through contributions to education, housing, nutrition, research, industry, and extension work.

For example, in 1961 there were four Israeli women studying for advanced degrees in home economics at Cornell. Three of the four, Misses Rachel Avishar, Ruth Melchior and Bella Zamir studied under the auspices of the International Cooperation Administration. These women plan to institute a college of home economics in Rehovoth, Israel to train extension workers and high school home economics teachers.

Lectures given by foreign educators also contribute a great deal to international home economics. Cornell has several foreign lecturers speak each year on widely different home economics topics, all with international emphasis. For instance, last fall, Miss
by Elizabeth Vedder

Freda Gwiliam, educational advisor for Great Britain's Department of Technical Cooperation, presented a lecture on "Problems of Education in Rapidly Developing Countries in the British Commonwealth."

Workshops and seminars are also held as educational devices for foreign students within the college, visiting foreign educators, and foreign conference delegates.

Not only is the College host to many people from other lands, but also a large number of faculty members travel and study abroad each year. Several of them have conducted missions to foreign countries to teach or study special problems.

Professor Glenn H. Beyer of the department of housing and design was recently awarded a Ford Foundation travel and study fellowship for study of housing programs for the aged in Western Europe. He also headed a housing mission in Venezuela at the request of that government. The mission was sponsored by the International Cooperation Administration and its purpose was to recommend a personal savings and home mortgage system for that country.

Another professor who has done considerable work in foreign countries recently is Prof. Emeritus Hazel Hauck of the department of food and nutrition. Professor Hauck worked in bang chan, Thailand, on a Cornell study of nutrition and health in rural Thailand. She also worked on a nutrition study in avo Onnamma, Nigeria.

In September, 1961, sixteen African women educators who had participated in these workshops spent six days as guests of the College of Home Economics as part of a three month study tour of the United States. They attended classes and meetings at Cornell, and visited high schools and homemaking extension classes. While in Ithaca, they stayed with local families, observed American family life, and discussed problems of the family in a changing world.

In 1962, as a result of this visit, the College received a request from one of the participants, Miss Alberta Addo of the Ministry of Education in Ghana, to investigate the possibilities of starting a project of education and research in home economics in Ghana. In response to this request, Prof. Kathleen Rhodes of the department of home economics education left for Ghana on November 2 to explore the possibilities of a long-term project between the College of Home Economics at Cornell and the Ministry of Education in Ghana. Specifically, she is investigating the possibility of developing research projects and a curriculum in home economics at the Winneba Teacher Training College in Ghana. If the project develops, the Home Economics College will be significantly involved in training teachers who will in turn train the citizens of Ghana in phases of home economics which will greatly influence their way of life.

All of these aspects of international development in which the College is involved are vitally important and valuable. Home economics deals with the family and family life. Since many of the countries concerned are underdeveloped simple societies in which the family is the most important societal unit, this international interest is one of the most important contributions the College of Home Economics can make.
IFYE
Friendship Around The World

by Michael Seif

The International Farm Youth Exchange is a program devoted to international understanding. Its methods of achieving this understanding are through people-to-people contact, sharing of experiences, exchanges of ideas and, mostly, through the personalities of the young men and women from the United States and abroad who participate in the program.

IFYE was started in 1948, when 23 young men and women took part in the program. Now each year at least 100 delegates go abroad from the United States and more than 100 exchangees come to this country.

In the United States, IFYE is a privately supported program, made possible by combining the support of 4-H members, leaders, and local businesses with national contributions through the National 4-H Sponsors Council. The Council assumes responsibility for raising funds in the banking, farm machinery, food, feed, cotton, fertilizer, and other industries. A five-year grant by the Danforth Foundation also supports the program.

Countries on six continents participate in IFYE. In most of these nations a rural youth or farm organization is the sponsor. Ministries of Agriculture often assist in these countries much the same as the U. S. Departments of Agriculture and State cooperate in this country.

Miss Leighton directs program

In New York State, Miss Martha Leighton is the state coordinator, and her office in Roberts Hall is the state administrative center of IFYE.

"The number of contacts which IFYE makes," explains Miss Leighton, "is higher than the 250-or-so delegates which are originally involved. If each IFYE stays with four families during their exchange period, and if there are at least four members in each family, then that makes a minimum of 4,000 people who have had the opportunity to live with and get to know someone from another country. If you then add up the number of new friendships, the people who have heard and seen the exchangees on the radio and television and through personal speeches, and those who have read about them in news articles, you begin to get some idea of just how far reaching this program actually becomes.

"That is why it is so important that the exchangees selected are mature, responsible young men and women who are genuinely interested in finding out about people in other countries; countries which may appear to be superficially different from their own. It is a program made up of people; it involves a lot of heart."

Besides a sincere desire to learn and understand other people, there are a few basic qualifications for U. S. IFYE delegates. They must be between 20 and 30 years of age, single, and in good health, have at least a high school education, a background of farm life, and an interest in farming or an agriculturally related occupation. Experience in a rural youth organization is helpful.

Cornellians go abroad

This year two of the three New York IFYE delegates were former Cornell students. Gordon Peck and Janet Nickerson both graduated in June. Gordon graduated from the College of Agriculture; Janet, from the College of Home Economics. They represent two of the 125 young people which IFYE sent abroad in 1962.

Gordon began his trip to Iran in June with a one week orientation in Washington, D. C. In the first of his bi-weekly newsletters, Gordon wrote home about his travels. "After two weeks, three days, and eleven hours of sometimes hectic, but always enjoyable travel, my IFYE sister, Miss Martha Behrent of Montana, and I arrived in Teheran, the sprawling capital of Iran.

During his first week outside of Teheran, Gordon lived in the village of Gogtapeh. He noted many differences there between the Moslem and Assyrian men and women.

In his five letters since August 6, Gordon has written home about the lives and customs of the people with which he lives. He tells about the agriculture, the development programs, and the many problems of a people in a country without sufficient water to support them.

Janet began her six month visit to Uruguay in October. Her trip began with "... an intensive week of pre-departure orientation in Washington, D. C., a two day flight down the western coast of South America, and four days of orientation in Montevideo..." During her stay, Janet will live with eight different families.

During the brief time in which she has been in Uruguay, Janet has been received very warmly by her new family, relatives, and the whole community.

Help correct U. S. image

The final paragraph of her first letter is devoted to her thoughts of what is to come in the near future: "I close now, already awed by the way in which the U. S. is looked up to—but frightened by my responsibility to correct and maintain our image. Spring is in full blossom here, and I am at the very threshold of a very new and wonderful experience—that of being a member of a family who speaks, eats, worships, plays, and thinks differently than my own in the United States."

Cornell Countryman
"... it involves a lot of heart."

Johannes Vos, from the Netherlands on Mr. George Humphrey's farm in Oneida County.

Roop Gurtu from India visiting the Watson Foster family.

Pekka Hujala of Finland at the Boyd Oliver Farm in Ontario County, N. Y.

COOPERATION ... Antonio Magalhaes of Brazil drying dishes with Mrs. Corwith of Waterville, N. Y.
Dr. Laurence MacDaniels, professor emeritus of horticulture in the College of Agriculture, is one of many well-known Cornell professors who have taken an active role in "growing agriculture" on the international level. He and his colleagues temporarily leave the campus life of Cornell from time to time by taking advisory roles and other positions in foreign countries.

For the past fifty years, Dr. MacDaniels has been a walking authority on walnut production and small fruits. Although this may be his main interest, he has other areas of endeavor, too. When I drove up the driveway to his home recently, he was out in the flower bed, covering up the few last flowers before the evening freeze. We went inside and sat down to talk about his travels.

"How many different countries have you visited?" I asked.

Professor MacDaniels rubbed his face and thought for awhile. Finally he said, "Well, I've visited the Near East, the Middle East, and the Far East. And I have had two separate contracts with Yugoslavia in the advisory capacity."

From 1919 to 1921, Dr. MacDaniels visited the Near East to help with foreign relief. During the Second World War, he traveled throughout the Middle East.

"This time I was sponsored by the Near East Foundation," he said. "Cornell granted me a leave and I went to Egypt and Italy, hoping to get into Albania. I wanted to work with the United Nations Rehabilitation Administration, but this didn't work out for the Communists took over the country and I never got inside."

In addition to these countries, the emeritus professor has worked in the walnut and small fruit areas of Yugoslavia. "In the Yugoslav horticulture circles, I'm known as an 'expert' as they say," he said as he adjusted his glasses.

"What does an "expert" do to get to go to a foreign country?" I asked.

"In my situation," said the professor, "the Yugoslavian government was looking for a skilled person in the culture of English or Persian walnuts. They applied through the International Cooperative Administration and our government took over from there. The USDA in Washington keeps a file on qualified persons and their background. They asked that I consider the job. From here, the Yugoslavians hired me by direct contract. The United States paid my salary and Yugoslavia paid the transportation cost."

Because of the direct contract, Dr. MacDaniels worked in conjunction with the government and the people.
Dr. MacDaniels, right, examines yellow peppers in the Yugoslavian fields.

“What about a program of work?” I asked.

“When I arrived in 1960, I had a conference with representatives of the government,” he said. “They had a complete agenda planned for the duration of my stay.

“First, there is a survey taken. This is to estimate the number of trees actually producing walnuts. Most of the walnut trees are found in the small villages and scattered about the individual farms,” noted MacDaniels, “Collective farms seem to be more interested in corn, wheat and livestock production.”

The second step is to examine profiles or areas where commercial growing might be done. “I discovered that many farmers believed that walnuts would grow on poor waste soil,” said the Scientist.

“I showed them new techniques and gradually convinced them that the walnut is one of the most exacting plants to grow.”

The final step is the propagating of new varieties and the testing of trees. Since the climate of Yugoslavia is similar to New York State, many of our American varieties will grow over there. “However,” said the horticulturist, “the Russian steppes of the north and the warmer areas of the south have definite influence.”

Dr. MacDaniels has worked with several Yugoslavians in teaching them to solve their own problems. “Women help a tremendous amount in horticulture,” he noted. “One such woman, Miss Milica Oblak, even came to Cornell to study horticulture. She is now in charge of all the blueberry planting in Yugoslavia. Research books from the United States add another facet to the growing industry.”

Dr. MacDaniels feels the European Common market is beginning to stain the Yugoslavian walnut trade. They can’t get their products to the markets because of the communists influence, he says. Consequently many merchants are shipping their products to western countries and northern areas.

“What are your future plans?” I asked.

“Later this year,” he said, “my wife and I plan to travel to Mexico for a six-weeks tour. It should be an exciting experience, but I will never forget Yugoslavia.”

---

For Rest or Refreshment
A Cordial Welcome Awaits You
at the

Ithaca Hotel
Home of the famous “Dutch Kitchen”

Rooms with Bath—Free T.V.—Parking
Family Rates
Dining Room—Cocktail Lounge
Excellent facilities for Entertaining
SMALL PARTIES — COCKTAIL PARTIES
BANQUETS — WEDDINGS

A History of Cornell
by MORRIS BISHOP

Drawings by Alison Mason Kingsbury

$7.50

Autographed copies available...

on sale now at the

Cornell Campus Store
Barnes Hall

November 1962
With a warm friendly smile and a twinkle in her
eyes Dayavati DeSilva claimed that only one
year at Cornell had completely “sold me on Cornell,
Ithaca, and everything they offer.”

Miss DeSilva is the principal at Uyanwatte
Teachers College, supported by the Ceylonese
government and has returned for a second time to Cor-
nell. Her first trip to the University was in 1958 when
she came to work on her master’s degree in child de-
velopment and family relationships. At the same time
she was a research assistant in that department. Miss
DeSilva found Cornell life so stimulating and chal-
lenging that she returned again this year to work for
her doctorate.

Miss DeSilva is an outstanding woman in her
native country, since very few people from Ceylon are
permitted to study abroad. The prime minister of the
country is the only official who can grant permission
for citizens to accept scholarships or to apply to for-
ign schools for advanced study. When the American
Association of University Women granted Daya an
International Fellowship award, the prime minister
readily approved her request to study at Cornell.

Miss DeSilva is active in the field of education
in her homeland. She was president of the Association
of University Women and comes from a family who
value education highly. Her brothers and sister are
all working for the government or are involved in the
area of education.

Dr. Feldman is instrumental

Miss DeSilva was first introduced to the idea of
studying at Cornell in 1957 when Dr. Harold Feldman,
professor of child development and family relations-
ships’ visited Ceylon on his sabbatic leave of absence.
When she arrived at Cornell the following year, Miss
DeSilva worked under Dr. Feldman. Upon returning
to her country, she has played hostess to several other
Cornell professors who have visited Ceylon.

“I enjoy and encourage these visits from Ameri-
cans. I have gained so much valuable knowledge
through my experiences at Cornell that I feel your
countrymen can equally benefit from learning about
my country,” explained Miss DeSilva.

Peace Corps in Ceylon

To encourage cooperative exchange of ideas, Miss
DeSilva requested a Peace Corps volunteer to work at
her college in Ceylon. Her request was granted and at
the present time, Pat Jelletich is teaching at the
Uyanatte Teachers College.

This institution has a two year professional
course in education. After graduation, students are
prepared to teach at any of the schools in Ceylon. Miss
DeSilva has been principal at this college for eight
years and loves her job.

“I have a wonderful opportunity to meet many
young women and guide them through their college
years,” she smiled, sincerely. “I would also like the
same chance to meet American girls here at Cornell
and exchange ideas with them.”

Miss DeSilva is now auditing Child Development
and Family Relationships 115 and enjoys meeting the
girls in this class. She particularly enjoys the sections
where she is given a first-hand opportunity to hear
the students express their personal opinions and at-
titudes on various subjects.

Miss DeSilva is an extremely warm and personable
“diplomat” from Ceylon. She is genuinely interested in
Cornellians and welcomes an invitation to discuss ideas
and problems with them at any time.
The influence of the sprawling complex of Cornell University extends much further than the area of its own large campus. Many people of diverse fields of endeavor have carried its name to places all over the globe. Cornell will soon be represented on the campus of the University of Liberia. Professor Carlton Wright, professor of food information service of the department of agricultural economics has been chosen director of an Agency for International Development project in which Cornell University will be cooperating with AID in helping to improve the University of Liberia at Monrovia. Under the AID program the university will be given assistance in removing some of the stumbling blocks which have prevented the century-old institution from growing and developing at a rate in keeping with the educational needs of the country.

Contract stems from studies

This project became possible with the signing of a three-party contract last May between AID, Cornell University and the government of Liberia. The agreement was the culmination of studies by Prof. Charles C. Hughes, department of anthropology, Prof. A. Gordon Nelson, education and Prof. A. W. Gibson, personnel administration and campus co-ordinator of the Cornell Project in Liberia, of the university's facilities and recommendations by them of the type of assistance that would be most beneficial. The agreement provides for the use of the resources and personnel of Cornell with financial backing from AID, in alleviating the administrative, curricular, and financial problems of the university. Emphasis is placed on the idea that Cornell representatives, under the direction of Professor Wright will be working side by side with the Liberians in demonstrating to them more effective ways of achieving the goals of the university.

The university is one of the few institutions of higher learning in Liberia today. It was formed in 1862 with the help of Americans interested in the African colony. It has grown slowly, however, due to the general lack of educated personnel to man its faculty and good college preparatory schools from which its students could come. But many of its problems are also internal and these are the ones Professor Wright will seek to work out.

Wright to develop plans

Professor Wright's task, as Chief of Party for the AID project, is to develop a specific plan of action whereby the upgrading of the university can be carried out. He is now in the process of getting passports and visas to get him to his destination in Monrovia, Liberia. Once there, under the terms of the contract, he will review the situation and from these findings and studies of the previous recommendations, devise a working plan and build up a staff of approximately fourteen members, most of whom will be recruited from the Cornell staff.

Seek to increase effectiveness

The plan of action will concern many of the aspects of the university system. At present the university is a combination of several small colleges including four degree-granting schools, a law school, liberal arts college, forestry school, and teacher training school and four non-degree granting schools for business administration, home economics, science and education. The curricula of these schools and the content of the courses will be studied. Professor Wright's staff will work with the faculty in an effort to accomplish this and also increase effectiveness. In the registrar's office they will help in making and maintaining accurate records. The library system, an important part of a good university, will be improved to enable students to derive maximum benefit of it. Efforts will be made to increase the efficiency of the general administration of the university. It is hoped that the influence of a good university, such as Cornell, can be used to improve the quality of the University of Liberia as an educational institution.

Wright is well qualified

Professor Wright's experience in both the training and administration of teachers will be valuable to him in the program. He has considerable teaching experience, both on the high school and college levels.

He has held his appointment in the College of Agriculture since 1948 and also has a courtesy appointment in the College of Home Economics. Previous to joining the Cornell faculty, he was director of the State University Agricultural and Technical Institute at Cobleskill. He also served as director of research and publications for the American Vocational Association and helped organize the Bureau of Consumer Food Marketing in New York City.

In regard to his plans for the Liberia project, Professor Wright said, "Our approach is to use whatever means we can to help the university's administration develop a first-rate institution in the Republic of Liberia."
Fifth annual College Open House for prospective students in the Cornell College of Agriculture was held on the Campus November 3 under the joint sponsorship of the College and the Alumni Association. Approximately 100 high school students and 60 alumni, parents and teachers from all parts of New York State participated in the day-long program, the purpose of which was to acquaint prospective students with the numerous educational opportunities available at the College and the University.

The morning session opened with an assembly in the main lecture room of Riley-Robb Hall. A brief welcome was given by Dr. Thomas C. Watkins, director of resident instruction, after which a film entitled, "Dynamic Careers in Agriculture" was shown.

Following the film, a panel discussion was conducted by members of the College faculty concerning the various educational opportunities offered at the College. Panel members and their general fields were Prof. Robert Plaisted, department of plant breeding, plant sciences; Prof. J. M. Elliot, department of animal husbandry, animal sciences; Prof. John Harp, department of rural sociology, social sciences; Prof. Gilbert Levine, department of agricultural engineering; and Prof. Howard S. Tyler, director of placement, general agriculture.

Following the faculty panel, a discussion panel was conducted, giving an overview of student life at Cornell. W. Stephen Middaugh, a graduate of the College of Agriculture in June and presently a student in the Graduate School of Business and Public Administration, headed the panel. Other members were Laing Kennedy, '63, famed goalie for the Cornell ice hockey team, Patricia Ulbrich, '63, coed in the College of Agriculture, and Donald T. Wilson, '63, president of Ag-Domecon Council. The discussion was closed with a summary and question period.

The afternoon program opened with a luncheon for students, faculty and alumni in the Stocking Hall cafeteria. Donald G. Robinson, president of the College Alumni Association, delivered a brief welcome, which was followed by greetings from W. Keith Kennedy, director of research of the College of Agriculture. Morton Adams, '33, executive vice-president of the Curtice-Burns Corporation, delivered the main address, outlining the various opportunities for graduates of the College in agricultural businesses.

Following the luncheon, a tour of the campus for prospective students was conducted by members of the Ag-Domecon Council. The Riley-Robb Seminar Room was the center for counseling on college admission from Admissions Director Leigh H. Harden and Admissions Counselor Charles A. Shoup. Participants in the Open House were then given the opportunity to discuss the College with representatives of the academic departments.

This program is one of the many activities which the College of Agriculture and College alumni present each year to interest qualified high school students in the College. The program has proven its value in past years by the number of participants who have eventually applied and become students in the College. The hard work of the Alumni Association was invaluable in making the program a success.
For transmitting power...or conveying, nothing does it like Link-Belt chain

For day-in, day-out service, nothing can match Link-Belt chain's strength and endurance...its positive efficiency...which add to the reliability of farm equipment drives and conveyors.

Today, over 300 farm machine manufacturers obtain this reliability from Link-Belt. Experience has shown them that chain marked with the double-arrow > < trade-mark is made to high standards...has consistent quality and pitch uniformity...will maintain rated performance and efficiency on their machines.

Link-Belt offers industry's most complete line of drive and conveyor chains, chain attachments and sprockets. Also "bonus" services that aid the designer, improve the design: application counsel, field analysis, laboratory service and others. These services multiply the value of Link-Belt chains, but not the price!
Did You Know?

- The College of Agriculture at Cornell now has 70 undergraduate students from 28 foreign countries and 248 graduate students from 59 foreign countries.

- Cornell University records of 1868 reveal that a Russian student was enrolled in the first class offered in agriculture.

- A Cornell student of the Class of 1873 became president of a college of agriculture in Brazil.

- By 1900, students came to the College of Agriculture at Cornell from Canada, Switzerland, Turkey and Japan.

- More than 150 professors now on the College of Agriculture faculty have had foreign experience in continents of South America, Asia, Africa, Europe, and Australia.

- The College of Agriculture at Cornell was a partner with the College of Agriculture at the University of the Philippines from 1952 to 1960.

- During 8 years of the Cornell-Los Banos contract, 51 visiting professors went to the Philippines with their families; 35 were from Cornell and 9 others were Cornell trained.

- The Colleges of Agriculture at Cornell and the University of the Philippines at Los Banos are currently exploring possibilities for cooperative work in the future. To this end, studies are in progress in cooperation with the Ford and Rockefeller Foundations, the University of the Philippines, the Philippine government, and agencies of the United States government.
What Is The New York State Extension Service?

Extension Service work is a means by which the research of the New York State Colleges of Agriculture and Home Economics is interpreted for and taken to farm, rural non-farm, and urban peoples of the State and industries allied with agriculture. The total research budget of the two colleges is approximately $9,500,000. To be effective, this research must be interpreted and taken to these “audiences” so they can make use of its results to help themselves.

As conducted in New York State, Extension work is a unique kind of education. It provides factual, unbiased information, encourages people to make decisions for themselves, and then gets them to act.

In the agricultural phases of Extension Service programs, the field of influence includes not only the producer of farm commodities but also the suppliers of farm “inputs,” processors, transporters, marketers, and consumers of agricultural products. More than 500,000 people in the State, for example, are dependent upon a healthy agriculture in the processing and marketing of farm commodities for the benefit of consumers. Add to these the many thousands who provide the “inputs” for agriculture—the seed, feed, fertilizer and farm machinery dealers and others. A rural community serving an area of 1,000 farmers generates the same level of economic activity as one industry with 3,000 to 5,000 employees. Thus it is clear that a competitive farming industry is vital to New York State’s economic growth.

The health of the industry is dependent in the main upon the application by producers of the results of research that are released by the scientists of the New York State College of Agriculture and its Experiment Stations, working in close unison with their counterparts in the U. S. Department of Agriculture and cooperating research workers in agricultural industries.

The demand upon the knowledge and judgments of Extension Specialists and County Agents is greater and more exacting today than ever before. There is a continuing flow of new information from research which outdates previous knowledge. Thus Extension teaching programs are constantly adjusted to meet the major, up-to-date problems of people with whom Extension is involved.

Specifically, it is the purpose of County Extension Agents—agricultural, home demonstration, and 4-H Club—to encourage and assist individuals to change and improve their farming and homemaking practices for the benefit of the individual, his family, and society. While the core of their work is agricultural and home economics technology and management, other types of subject matter relating to the well-being of the individual, his family, and community have been included in the past and continue to be a part of their concern.

The New York State College of Agriculture at Cornell University
STUDY OUTLINES CAN BE FOUND in our BOOK DEPARTMENT an aid to practically every subject.

Cornell Campus Store
Barnes Hall

Looking for the finest in print?
You'll find it at—

Norton Printing Co.
317 E. State St.
Ithaca AR 2-7800
"Printers of the Cornell Countryman"

CORNELL COUNTRYMAN
Vol. LX December, 1962 No. 3

In This Issue
Dynamic Director ................................... 3
Extension: South of the Border .................... 4
Aspects of Extension ................................ 7
Better Living . . . Through Extension ............... 8
Extension on TV .................................... 9
Letter to the Editor ................................ 10
Extension Internships .............................. 11
Flowering Opportunities .......................... 12

The Cornell Countryman is published monthly from October through May by students in the New York State Colleges of Agriculture and Home Economics, 490 Roberts Hall, Cornell University, Ithaca, New York. Second-class postage paid at Ithaca, New York. Printing by Norton Printing Co. of Ithaca. Subscription rate is $1.75 a year or two years for $3.25; three years for $4.50; single copies, 25 cents. A member of Agriculture College Magazines Associated. Represented for national advertising by Littell-Murray-Barnhill, Inc., 369 Lexington Avenue, New York 17, N.Y.

EDITORIAL BOARD
James Sample, Michael Seif, Cheryl Kurtzer, Arline Stroka, Deborah Simon, Howard Zuckerman, Barbara Stiebler, Thel Levine.

BOARD OF DIRECTORS
Prof. Emilie T. Hall, Prof. William B. Ward, Prof. Thomas C. Watkins

COVER
Designed by Nancy Felthousen, the cover is symbolic of extension work done by Cornell University. The points symbolize the several directions extension work follows to serve the needs of the people of the State of New York.

Staff
Editor-in-Chief ................................. Paul Roman
Managing Editor .............................. Hillary Brown
Associate Editor .............................. Steven Reinheimer
Home Ec Editor ............................... Elizabeth Vedder
Business Manager .............................. Alice Fried
Advertising Manager ...................... Frank Goetschius
Circulation Manager ....................... Robert Benedict
Photography .................................. Richard Wallach
Cover Designer ............................... Nancy Felthousen
The New Farmer has the old virtues. He works hard. He's serious about the land. He wants a better life for his family. He's built the most progressive farm economy in the world.

What makes him new? The same thing that made his father and his grandfather new in their time: his ability to put new ideas to work on the farm.

Back in the Twenties, G.L.F. was a new idea—a way for farmers to supply themselves with products made to their own specifications.

Since then, G.L.F. has played a big part in developing the innovations adopted by each generation of New Farmers. Through grants to colleges ($70,000 to Cornell this year) and on-farm research, G.L.F. supplies a constant flow of new products and new methods for farming in the Sixties.

Some examples: the Ferti-Veyor which moves fertilizer from plant to planter with no rehandling on the farm; the Gravi-Meter for easy calibration of fertilizer and pesticide spreaders; the colony cage system for laying hens, which allows a poultryman to double or triple his flock without adding buildings or working more hours.

The New Farmer's contact with G.L.F. is through the salesman. Not a salesman in the ordinary sense, though. The G.L.F. salesman works with the New Farmer. Together they plan the new ideas that will make farming even better tomorrow.
"For many years he has been an active worker and leader in cooperative extension programs in New York State and the Northeast. We feel that his knowledge of problems in agriculture, his concern for the well being of families, and his background in the Cooperative Extension Service strengthen his qualifications for this important new assignment."

These were the words of a joint statement by Deans Helen G. Canoyer and Charles E. Palm at the appointment of Prof. Alvin A. Johnson as director of extension of the State Colleges of Agriculture and Home Economics at Cornell. Since taking the position in July, Professor Johnson has made a significant mark in extension administration. For those he has come in contact with, he has left the impression of being exceptionally dynamic.

Formerly a professor in the department of plant breeding, he has been concerned with the production, marketing, and promotion of seed for new crop varieties in New York State and the Northeast. He has aided in the development of certified seed production plans of Cornell-recommended varieties in areas of the country best suited for seed production. He has also lectured extensively in the United States and Canada on plant breeding, seed production, and agriculture in general.

Director Johnson has always been associated with agriculture, having been born on a farm in the Red River Valley of Minnesota. Following high school graduation, he worked with his father and brothers in the operation of a 1,000 acre crop and livestock farm.

Deciding to seek education in scientific agriculture, Johnson began studies at North Dakota Agricultural College. Following graduation, he went on to Michigan State College where he was a graduate assistant in the farm crops department before receiving the Master of Science degree in 1938. He then worked in seed production research and served as extension specialist in farm crops until 1946, when he came to Cornell.

Johnson has served as extension project leader of the department of plant breeding, and has been acting head of the department. One of the goals of the extension program during this period was to achieve cooperation with the wholesale and retail seed trade, and with seed certification and seed growing organizations.

He served as representative of the Northeast on the planning committee of the National Foundation

Seed Project and has been active in the International Crop Improvement Association. He was instrumental in the organization of the New York Foundation Seed Stocks Cooperative in 1947, and in the reorganization of the New York Certified Seed Growers' Cooperative in 1951.

His foreign work has included participation in the U.S. Aid of Greece program in 1948, where he aided in Greek seed production. While on sabbatical leave in 1953 and 1954 he returned to Greece and worked with plant breeding stations in the country, as well as studying seed production and plant breeding programs in other European countries.

In 1959, he worked with a Ford Foundation agricultural committee to make recommendations for increased food production in India. The following year, under the sponsorship of the Rockefeller Foundation, Johnson went to India with other specialists to help implement the recommendations. He worked with selected demonstration districts in cooperation with representatives of the Indian government, and served as consultant on the production and distribution of improved seeds, including corn, wheat and rice.

In April, 1962, Director Johnson participated in a world conference on crop and seed improvement problems in Rome, Italy, sponsored by the Food and Agriculture Organization of the United Nations.

These extensive achievements did not go unrecognized, for in August of this year he was presented the 1962 Achievement Award in Agronomic Education by the American Society of Agronomy at their 54th annual meeting, held on the Cornell campus. The citation stated:

"(He is) a provocative thinker and a major contributor of new ideas in many areas of extension and research at Cornell University. . . . He has a deep interest in counseling and training young people . . . (He is cited for) his effectiveness, leadership, willingness to pioneer and develop new ideas, his judgment, and his integrity."

With these attributes, along with Director Johnson's dynamic outlook and vigor, there is no question but what the New York Extension Service will move forward steadily under his leadership.
Argentina, playing a large and significant role in the development of South America, has become increasingly important to the United States, politically and economically. It would, therefore, be most beneficial to our country if Argentina could be developed further in the areas of agriculture and industry. One means by which this may be accomplished is through educational and governmental cooperation. An example of this has been the work of Professor William B. Ward, head of the department of extension teaching and information at Cornell University, in Argentina during the period of August, 1961 to August, 1962.

Basic to any extension program directed toward agricultural progress is its communication to farmers and allied industries. The purpose of Ward’s program was to develop an agricultural communications system. He went to South America at the request of the government of Argentina, in cooperation with the United States Agency for International Development. Working out of Buenos Aires, Professor Ward’s actual assignment was to assist in the development of a program to disseminate research results to farmers and others who could use them and to help improve INTA’s (Argentine Agricultural Research and Extension Agency) internal communications.

The plan was centered around the Pampeana region, the source of two thirds of Argentina’s agricultural products. Specifically the agricultural information program was established to improve the domestic beef production through the application of modern techniques. This is Argentina’s main economic problem.

A one and one half per cent tax on all agricultural exports supports INTA; therefore INTA is directly responsible to the farmers for its actions. Agricultural extension and research is being employed to assist the economic growth of the country. In a country such as this, economic growth is based upon the parallel work of agriculture and industry.

Argentina is a great producer of beef and wheat, with agricultural exports being the greatest source of revenue for the country. The crux of the problem lies in the unbalanced export and import schedule that faces the agricultural producers of Argentina. Imports heavily exceed exports. What this means for the agriculture and economy of the country is that the producers are paying for industrial development, since the export revenue comes from taxes on farm products.

The government has been attempting to limit the inflation problem of the country, while at the same time increasing agricultural production to earn foreign exchange (remembering that exports must be increased). The government also has tried to institute several new policies, such as less control over production and marketing and more emphasis on free enterprise. These were initiated to spur the economy, and were aimed at solving four important problems—limiting imports, increasing exports, curbing inflation, and increasing production by decreasing domestic consumption.

Faced with economic and communication probl-
lems, "Plan Ward" got underway early in August, 1961. A general survey of the situation revealed numerous obstacles which had to be overcome. One problem was to relay research from INTA to farmers and extension agents who would benefit most from it. In addition, extension agents lacked written communication facilities (leaflets, bulletins, etc.) to use in their work. Compounding the situation was the fact that the INTA often was not using the available press and radio facilities. Finally, there was a lack of exchange between experiment stations and national headquarters.

To remedy these problems, the newspapers and radio stations were willing to support "Plan Ward" by relaying the agricultural information to those who needed it most. Most important, however, was the need for competent professional writers who could interpret the research for the agricultural producers of the country.

It was in this area that the work of Professor Ward became most significant. Once these writers could be employed, work progressed more easily. Their main work was done in the INTA experiment stations. The articles produced by these professional writers, whose job it was to interpret research results, were distributed in many regions of the country for all mass media.

Newspapers, magazines, and radio stations transmitted the research findings of the INTA to the people. Extension agents were receiving research information unheard of before, and distributing it to farmers in the forms of leaflets and bulletins. The entire program was supplemented by the constant exchange of informational material between writers stationed at the various experimental stations and the extension agencies.

Professor Ward also worked with various missions that were of significance to agricultural progress. In this area, Ward was in charge of press and public relations for a Presidential mission on foot and mouth disease.

Two other areas also received concentrated effort. One program consisted of extensive lectures and speeches to organizations of farmers and other associated personnel. The other was the training of communications personnel and extension agents in the subject areas that would make the program more successful.

All of Ward's work was made easier and more effective through the full cooperation of the Argentine government and officials associated with it. The final, most satisfying result of all was local adoption of practically all the measures instituted on the national scope. These important benefits easily overshadowed any possible inconsistencies in organization or function that may have existed in the program.

As to the possibilities for future extension work in Argentina, Professor Ward has contributed many ideas toward a specific goal—namely to combine research, extension, and teaching into one program. He made suggestions for expansion of the program to experiment stations throughout the nation, for a definite staff with qualified full-time personnel for information offices, and for a departmental organization of the INTA to keep research and extension work integrated. In addition to this, he recommended that television units be established which would become important means of communication for INTA, and intensive investigation be conducted into the characteristics of the farm audience and the effects of the various methods of communication.

In retrospect, we can see that "Plan Ward" was initially successful. Professor Ward has contributed his ideas and time to a very worthwhile cause. We can only hope that, in the future, programs of this caliber will be continued and the possibilities for extension in other areas will be explored to a similar extent.
Efficient methods of farm management, including modern agronomic and conservation practices, are disseminated to the farmer through extension agents.

Extension agents are working with supermarket managers under a new program in the State.

Four-H Club work is an important scientific aspect of agriculture.
Aspects Of Extension

- Extension education carries the work of Cornell University to people throughout the State.
- Agricultural extension work results in modern technology and higher farm incomes.
- Home economics extension work brings efficient home management and better family living to rural and urban residents.
- Youth extension work builds strong citizens for tomorrow, and teaches youth progressive agricultural and home technology.
- Specialized extension work aids persons engaged in many aspects of the food industry.
- New fields of extension education, such as the organization of community groups to study rural economic problems, involves more people in the job of democracy.
- The future presents many challenges to the Extension Service, but its progressive staff and dynamic leadership is prepared to meet these challenges.

Research at Cornell and other land-grant colleges becomes valuable and useful when it is taken to the people through extension. Here a scientist studies effects of radiation on plant growth.

Home demonstration work plays a vital role in training homemakers in the latest methods of management, textiles, design, food preparation, nutrition, and child care.

December 1962
Better Living . . .

Through Extension

by Elizabeth Vedder

In a basement room of Morrill Hall in 1900 Martha Van Rensselaer began her career at Cornell as the first extension specialist in home economics. She was called to Cornell to start extension work with farm women. She began her work in home economics by responding to letters written to her by farm women concerned with problems of homemaking.

Miss Van Rensselaer carried on this correspondence, then began writing bulletins of home economics information, organizing Cornell Study Clubs, correspondence courses and Women’s Institutes similar to the Farmer’s Institutes which were part of the already thriving agricultural extension program. The response so enthusiastic that soon a sizable staff was appointed and resident courses in home economics were started for academic credit.

Thus, home economics extension began as, and is still, the backbone of the whole home economics program at Cornell. The original purpose of home economics, that of helping homemakers improve family life, remains the primary purpose of the College today.

In 1914, field work in extension began when the first home demonstration agent was appointed to work in Erie County. In 1918, Home Bureaus were formed within the counties. The basic structure of these organizations remains today, although the name “Home Bureau” was dropped in 1955 when the organizations became County Extension Service Associations.

Today the New York State home economics extension program encompasses 55 counties and provides information and education for both rural and urban families. This information is based on research conducted at the College of Home Economics. However, the program is fundamentally of, by, and for the people of the State.

Needs and problems of the family are expressed by homemakers and research within the College is based upon these needs. The information gathered is then relayed back to the homemaker through the extension specialists and home demonstration agents.

Each county home demonstration department has an executive committee which plans and operates the program. The committee is elected by the county extension service membership. This membership consists of women organized in units and some members-at-large.

The executive committee employs one or more home demonstration agents for the county. This agent lives and works with the people in the county and helps develop the program according to their needs. She trains unit leaders and supplies information not only to the members but to many others in the county through newspapers, television, and public demonstrations. She is aided by extension specialists who are staff members of the College and who travel to the counties, training the agents and the lay leaders in the program activities the membership has selected.

State leaders at the College correlate the program with other agencies and assist the specialists and agents in carrying out an effective program.

In the past, home demonstration work has been carried out primarily with the extension service members through meetings with the local units. Special training schools for the program leaders and the county agents have also been conducted. Recently the program has been widened so as to reach women who have had no direct contact with the program. Several counties have instituted radio and television programs, and almost all agents write newspaper columns and articles.

Home demonstration agents also cooperate with agencies such as the Public Health Association, Girl Scouts, Public Welfare and hospitals in showing films, distributing leaflets and bulletins, and giving lectures and demonstrations.

One of the newest of these outside activities concerns the Surplus Foods Program. Home demonstration departments in several counties have developed information on the use of surplus foods for low income families. They have been developing recipes for these foods, and distributing this material at the surplus food distribution centers. Some counties have also trained welfare workers and home economic teachers who in turn can give suggestions on surplus food use to members of low income families.

Home economics extension is always on the lookout for new means of reaching more families in order to better family and community living. As a result of this desire to help as many people as possible, the home economics extension program has grown from a correspondence course with farm women to a dynamic state-wide organization of 84,000 rural and urban homemakers and a staff of professional home economists, backed by all the educational resources of the State College of Home Economics at Cornell.
A new and challenging field is opening to girls," stated Mrs. Mary Switzer, referring to the role of the home economist in television. As a home demonstration agent in Erie County, Mrs. Switzer had her own show "The Family and You" on a Buffalo network and at present is coordinating the home economics programs for that station.

Mrs. Switzer, discussing her career, explained that many counties throughout the State televise public service shows which are geared to homemakers. Many women have entered the field of television and gained valuable experience through these extension service programs.

What does management want from its public service employees? "Reliability," stresses Mrs. Switzer. "This is an important quality because the producer expects us to be punctual in completing our format, and in arriving at the studio before the show starts to check our props and materials." Other traits important to possess are enthusiasm, imagination, and the understanding and adherence to station policy, elaborated Mrs. Switzer.

Another opportunity open to women desiring a job in television is to work for a commercially sponsored program.

"Here's a tip for imaginative girls with some previous experience in this media—get an idea or a new angle, work it into a show, package it and try to sell it to a television station," advises Mrs. Switzer. "Home demonstration programs are now in great demand. In fact, we have estimated that between 150,000 and 200,000 viewers watch our program weekly." This fact proves that women are interested in the new and exciting ideas presented on these programs and enjoy sharing the experiences of other people.

Home economics have the opportunity to explore many new areas in the field of television. The most important, according to Mrs. Switzer, is to change the concept most people have about home economics, and to promote this field of science. "It's more than boiling a pot of water or sewing a button on a shirt," she emphasized.

"The Family and You," which is on the air once a week for one-half hour in the morning, features a variety of guests and activities planned by Mrs. Switzer and her staff. They also receive many suggestions from avid viewers. A beekeeper, explaining his profession; two teenage girls demonstrating how to bake and wrap cookies for delicious Christmas gifts; veterinarians exhibiting household pets and their proper care; as well as families who have planned unusual trips or activities, have provided topics for just a few of the shows.

"One of our most memorable guests was a turkey grower who appeared on the program before Thanksgiving. He arrived at the studio three minutes before show time carrying the star of the show. I reviewed the script with him—I was planning to demonstrate the proper method of stuffing a turkey. Suddenly the man's face went blank. He had never removed the entrails of the fowl. So while he ran off stage to quickly clean the turkey, I had to cover up and carry on alone until he was able to return," smiles Mrs. Switzer.

Having a regularly scheduled program is a full time job, and for one-half hour on the air, many hours are spent on preparation. Every six months the shows are planned for the coming half-year period. Each individual show is then prepared during the week preceding the showing. Special formats noting guest speakers, the topic for the day, the visual and audio highlights of the program and the props, are distributed to all participants.

"Although the show is spontaneous, we want each person to be prepared to discuss the subject," explained Mrs. Switzer.

If the staff plans to exhibit a certain skill one...
week, such as appliquing on the sewing machine, the demonstrator may have to practice many hours in advance so she can master the technique and not make any mistakes on the air.

During the show, Mrs. Switzer emphasizes the word “natural.” Each person is encouraged to speak, walk, talk and turn as if they were in their own home. “After all we do visit our viewer’s homes every week and we want them to feel right at home with us. I have found that television is a very personal media. Why, many people stop me on the street for a friendly chat, feeling that they have known me for years. It’s a wonderful feeling,” smiles Mrs. Switzer.

A television personality since 1948, Mrs. Switzer agrees to the amazing change which has taken place in the television industry in that period of time.

“When I was first asked to plan a television series, I had never seen a show broadcast over this media. So, in the company of my co-worker, we ‘non-chalantly’ walked into the only establishment boasting a TV set—the neighborhood bar—and studied the techniques and principles of the art of television to the cheers of a World Series game,” recalls Mrs. Switzer.

“I feel that any girl with a home economics background, exhibiting the desired qualities mentioned, will find, as I have, that television is an exciting media and provides for a rewarding career,” summarized Mrs. Switzer.

---

Letter to the Editor

I hope that no one reading the editorial in the November issue of the Countryman was persuaded by its views which reiterate an all-too-common misconception concerning the superiority of Western ‘culture’ (‘technology’ would be a more appropriate word.)

To state flatly, as your editorial did, that “the world must be Westernized . . . not that this is ‘good’ but it is the consequence of a myriad of random events” is to twist the facts to fit a preconceived and stagnant point of view. An unfortunate failing of many in the West stems from the rigid notion that their way is the best . . .

The truth is that all peoples have something to contribute to what your editorial calls a “universal culture,” in which direction we do indeed seem to be evolving (I avoid the word ‘progressing’ here.)

For their part, Westerners—and Americans in particular—certainly contribute most generously of their bountiful store of wealth and technical knowledge and, above all, their great personal charity. But they themselves will be the losers if they are not receptive to the gifts—which are often not material and therefore difficult to discern—which flow back in return . . .

John Clarke,
Dept. of Agricultural Economics

---

bothered by

CLASS STRUGGLE?

Solve Your Academic Needs

at the

TRIANGLE BOOK SHOP

in Collegetown
Are you interested in an excellent summer job, working as an assistant in the field of home demonstration? If the answer is "yes", then the Summer Internship in Extension is worth exploring. Sponsored by the State Leaders of Home Demonstration, with approval from the College of Home Economics, the program enables four to six juniors each summer to work in extension under the guidance of county home demonstration agents.

Prof. Ethel Samson, assistant state leader in charge of recruitment, formulated the program. It was then approved by Vera Caulum, the state leader; Dean Helen G. Canoyer of the Home Economics College; and Director of Extension A. A. Johnson. Plans were drawn up and given to the Extension Educational Policies Committee, which outlined guidelines for the program.

The Committee suggested that student select her own area in accordance with the needs of the county in which she would be working, plan the approach, and follow it through under the supervision of a home demonstration agent.

Which counties participate in this work? The State Leader's staff is responsible for selection, which depends upon the type of county program carried out during the summer, the interest of the county's home demonstration executive committee in participating. The interest, ability, and availability of the county agent's staff to work with an assistant, and cooperation of 4-H Club and agriculture departments in the country are also considered.

The criteria for the selection of students are: a high academic standing, leadership as shown in campus activities, an outgoing and pleasant personality, interest in home demonstration work, and a well-groomed, attractive appearance. You probably wouldn't be interested in home demonstration work if you didn't have the above qualifications, so don't hesitate to apply for the job.

There are three main objectives in the summer program: to give assistance to counties during the summer months; to familiarize out-of-state students with extension work in New York; and to help students gain insight and understanding in the responsibilities and duties of an assistant home demonstration agent.

Many opportunities for learning and gaining experience are inherent in this summer program. Students observe at one or more training schools taught by the agent, where they help in the preparation of material and demonstrations.

In addition, they do such things as assisting with countywide and district meetings, helping with radio and television programs, and writing weekly newspaper publicity.

Before the eight weeks of work begin, there is a two-week training session on campus. This serves to help students get acquainted with the staff (both county and College), to observe county training schools. It also helps non-Cornellians learn about the College and its home economics facilities. The total period of time is therefore ten weeks, for which the pay is $900.

Following the summer experience, there will be a follow-up program in which students will initiate and carry through a pilot project in food marketing. Dr. Carlton Wright, an extension economist in marketing, will aid in working out this phase of the program.

A well-planned program makes the Summer Internship an ideal way to learn, through experience in home demonstration. Interested in trying out? You may obtain an application from the Home Economics Extension Office in Room 285, Martha Van Rensselaer Hall.
Flowering Opportunities

by Prof. Dana C. Goodrich, Jr.

Commercial floriculture and ornamental horticulture are big businesses in New York. In 1959, 1,200 growers produced flowers and nursery crops with a wholesale value of about $30,000,000. Including sales at retail, growers realized an estimated cash income of about $40,000,000 that year. Flowers accounted for two-thirds of this total and nursery crops the other one-third.

Cash income from these horticultural specialty crops this year probably represents about five percent of the total agricultural income of the state. At that level, it compares importantly with some of the more prominent products of New York agriculture.

Consider some of the vegetable, field, and fruit crops grown in New York State, for example. Potatoes contribute fewer dollars than do flowers and nursery crops to agricultural income. Horticultural specialty sales are about twice the value of all cash grains (corn, wheat, oats, etc.) sold in the state. Receipts from flowers and shrubs are substantially above the value of apples, and are about two-thirds as high as the dollar income received by New York farmers for all fruit crops combined (apples, cherries, grapes, peaches, pears, etc.). Of course, the dairy and poultry enterprises are prime generators of agricultural income but the flower and nursery industries can be proud of their position among the leaders in crop income in New York.

Robert Gambino, graduate of the College of Agriculture, works with florists as an extension agent.

Today cut flowers account for the largest single slice of the commercial floriculture pie. Some of the front-runners include roses, carnations, chrysanthemums and orchids. New York is in first place in the nation in the value of snapdragons grown; the state holds many "seconds" and "thirds" among the other cut flowers.

Potted plants make up most of the remaining dollar volume of floriculture products produced in New York. In fact, they are the fastest growing part of the flower industry. Today azaleas, chrysanthemums, geraniums, lilies, poinsettias and the other potted crops represent about 40 percent of the total floriculture income. During the last ten years the value of potted plants produced in New York nearly doubled.

States tying with New York for leadership in production of florist crops are California, Florida, Pennsylvania and Illinois. Among the counties in New York with strong flower growing enterprises are Suffolk, Nassau, Erie, Monroe and Westchester.

Although nursery crops contribute less than flowers to agricultural income in the state, they are the most rapidly expanding segment of the horticultural specialties industry. Ornamental plants, which include deciduous shrubs, coniferous and broad leaf evergreens, make up over 85 percent of the value of nursery crops sold by New York growers. Coniferous evergreens are the leaders in this group and, along with deciduous fruit, nut, and shade trees, continue to increase in wholesale value faster than the average of all nursery crops. Again, California and Florida head the list in value of nursery crop production but are joined for certain plant materials by other states including New York. Suffolk, Wayne, Nassau, Livingston and Erie counties lead in New York nursery production.

Stronger competition from among flower and nursery crop producers in other states will force New Yorkers to change. Some growers will leave the industry. Many others with business and production abilities will continue to find in floriculture and ornamental horticulture a satisfying and rewarding way of life.

Alumni should consider the fact that the College of Agriculture at Cornell provides excellent education in floriculture and ornamental horticulture. Both two year and four year programs are offered. In all, twenty-one courses are offered by the Cornell Department of Floriculture and Ornamental Horticulture.
For transmitting power...or conveying, nothing does it like Link-Belt chain.

For day-in, day-out service, nothing can match Link-Belt chain's strength and endurance...its positive efficiency...which add to the reliability of farm equipment drives and conveyors.

Today, over 300 farm machine manufacturers obtain this reliability from Link-Belt. Experience has shown them that chain marked with the double-arrow \( \Rightarrow \) trademark is made to high standards...has consistent quality and pitch uniformity...will maintain rated performance and efficiency on their machines.

Link-Belt offers industry's most complete line of drive and conveyor chains, chain attachments and sprockets. Also "bonus" services that aid the designer, improve the design: application counsel, field analysis, laboratory service and others. These services multiply the value of Link-Belt chains, but not the price!
The faculty of the New York State College of Home Economics at Cornell University is composed of persons with training in many areas. There are architects and artists, chemists and economists, engineers, psychologists, physicists, sociologists, and home economists.

These men and women are attracted to the College by the flexibility of the program as it applies to all aspects of family well-being. They also serve on the faculties of the Cornell Center for Housing and Environmental Studies, the University Social Science Research Center, the Graduate School of Nutrition, and the University Graduate School.

With few exceptions, the professors who teach undergraduate courses also work with graduate students, conduct research, and contribute to the Extension program. Their involvement with research encourages the introduction into teaching of research findings often so new they are not yet generally available.

The curriculum is based on the natural sciences, the social sciences, the humanities, and the arts. In the classroom, the laboratory, and in Cooperative Extension meetings all over the State, subject matter from these areas is drawn on in a vast number of ways.

Helen G. Canoyer, Dean

No. 3 in a series from the New York State College of Home Economics, a unit of the State University, at Cornell University, Ithaca, N.Y.
Approximately 20 per cent of the 1962 graduating class elected to begin advanced study immediately after receiving the B.S. degree.

When they complete their studies they will have a choice among many satisfying remunerative positions because the number of opportunities, both at home and abroad, for professional home economists with advanced degrees increases daily.

Consultants and administrators in food and nutrition and many other areas of family life are needed in the technical assistance programs of many international organizations.

College departments are increasing their faculties.

Demands for research workers who have graduate degrees and experience are growing as both industrial and university research programs expand. This is particularly true in textiles, equipment, and in food and nutrition.

The home economist may work with chemists, bacteriologists, and engineers on product development, or with economists and marketing researchers to measure consumer demands and to provide information that will guide consumers in the selection and use of food, fiber, and equipment.

Cooperative Extension programs call for specialists with graduate training in home economics, as well as experience in communication and teaching methods.
Let them know how you really feel about them by selecting an appropriate card from the vast selection in our Card Department.

HAPPY VALENTINE'S DAY

Cornell Campus Store
Barnes Hall

The doctor said to count sheep but counting the extra profits my NYABC sired cows bring in is much more effective.
To the Editor:

One often hears Cornell referred to as an academic community—a term implicit in which is the notion of students and faculty jointly endeavoring to make the University a better educational institution. Certainly, as one has walked around the Campus this past few months, he could not have avoided overhearing the various expressions of concern about the student's role in the formulation of policy at the University. Yet, at the present time, there is no effective vehicle for effectively expressing much of this concern.

In view of the need, then, to ascertain and express the thoughts of the Agriculture students about the various educational policies here in the College of Agriculture, the Ag-Domecon Council is forming a Committee on Educational Policy to operate in this most significant area. The group, in cooperation with our faculty Educational Policy Committee, will consider and propose new policies for the College, and will review the many policies that are now in effect. Possible topics might include: the farm practice requirement, a proposal to make a certain proficiency-level in English a requirement for graduation, proposals to alter the course-numbering system, proposals to change the grading system, etc.

Certainly, I think, one can see that membership on this committee will be demanding of both talent and time, yet the opportunity (with its accompanying satisfaction) to contribute to the College's educational progress is also significant.

Two members of the Council have already indicated that they will serve in this area. We are looking for four to six other students to round out the committee's membership. If interested, please contact me at AR 2-1955 or Roger Lamont at AR 2-2766.

Donald T. Wilson
Pres., Ag-Domecon Council

To the Editor:

It occurred to us that both students and alumni would appreciate knowing about two international contributions their college is making in addition to those reported in your November issue.

One such contribution is the operation of a full-time office for foreign visitors and government-sponsored foreign students.

The visitors numbered 175 from forty-five countries this past year. They come in groups, or as single participants, and for periods of time varying from one day to several months. Their requests for information range from the use of atomic energy in agriculture, to technical questions on such subjects as food preservation, apple storage, poultry management, and livestock breeding. To help them get the information they are looking for, we arrange individual staff member conferences, special seminars, tours, and visits to farms, cooperatives, and communities. In addition to these friendly and satisfying contacts, we do all we can to help each participant understand our American heritage, culture, and agriculture, and try to give them a favorable impression of Cornell as an international institution. Visitors come to us from all over the world, but the largest numbers are from Latin America and Africa.

Alumni interested in inviting these visitors to their farms should contact the Foreign Visitors Office, 17 Roberts Hall, Cornell University, Ithaca, New York.

The government-sponsored students from the Agency for International Development (A.I.D.) are assisted by this office in getting admittance to the right department, and guidance, where needed, in their under-graduate or graduate school instruction. We assist them with plans for their vacations, take them on tours, and in general help them with orientation to America. We have fifteen of these students at present from eleven countries.

The second contribution is an orientation program for foreign graduate students in agriculture and related sciences. This program, sponsored by the Rockefeller Foundation, provides a nine-week course for foreign students prior to their entering graduate school, and includes intensive English language training and orientation to American culture, educational systems, and agriculture.

Foreign students not thoroughly trained in our language and not familiar with our customs, when placed in classes with American students, find their progress is severely hampered in their first term. The orientation program is designed to help them make this important adjustment before the fall term. Seminars, tours, social events, contacts with a host family in the Ithaca area, and one week on a farm are arranged and provided through this office. A total of forty-two students from Latin America, the Middle and Far East, and Europe have profited by this experience during its first two summers.

Prof. Emeritus Fred B. Morris
Foreign Contact Officer

Cornell Countryman
Benefits of Research

NEVER before has the working man spent such a small part of his
wages for his family’s food. It seems incredible that one farmer
can produce enough food and fiber for 26 persons. But, it is still more
impressive when we realize that if our farmers used the same methods
currently employed in Russia, it would require the entire national labor
force to produce the agricultural products now grown in the United States.
The tremendous contribution of our farmers to our high level of living
can best be expressed with the famous words of Winston Churchill,”Never
. . . was so much owed by so many to so few.”

The accomplishments of agriculture through research have been
phenomenal but the task has not been completed. In less than 15 years
we will have 45 million more to feed. The increased demand for food
and fiber will have to be met with no increase in land. The development
of new cultivated areas will not keep pace with the rate at which present
agricultural land is being diverted to other purposes—housing, highways,
and industry.

The achievements of agriculture in the past 20 years stem from the
application of modern technology derived from more than 100 years
of agricultural research. In the late 1800’s the first agricultural experi-
ment stations were established in the United States. The findings of
countless dedicated scientists became available to agriculture, but many
improved practices were not adopted until the need became acute in
World War II. With unbelievable rapidity old and new research results
were put to use.

The knowledge needed to grow the food and fiber for the increased
population of tomorrow is not now available. We should be concerned,
but there is no need for panic. We have dedicated and competent scient-
ists in both the basic and applied fields serving agriculture. Each day
they are learning more about fundamentals of growth and development
of cells, plants, animals, and their environment. Others are harnessing
this new basic knowledge to improve the technology of modern agricul-
ture. Still others are finding new and more efficient ways of processing,
storing, and distributing our foods so that we will continue to have an
abundance of high-quality and wholesome food.

It has been said, “Man cannot live by bread alone.” Our social-
scientists are constantly searching for ways of improving family and
community living to help you, the citizens of the Empire State, to have a
more satisfying as well as healthful life.

Just as agricultural research has been the pathway to the high level
of living we enjoy today, it will provide the key to unlock the secrets of
nature required to feed the people of tomorrow. Through research our
agricultural industries can remain the most productive in the world.

W. K. Kennedy, Director of Research
Colleges of Agriculture and Home Economics

January 1963
RESEARCH at the New York State College of Agriculture at Cornell during 1962 has brought tasty new foods to the people of the world, a keener knowledge of insects, soil, and the manufacture of proteins, and improved harvesting machines for farmers.

It brought more understanding of viruses, genetics, and the very creation of life itself. During 1962 the college's scientists gained greater knowledge of the day and night behavior of animals and man; they launched an all-out fight against underwater weeds, successfully market-tested an egg-carton for children, and even watched cockroaches at night to probe the mysteries of evolution.

Cornell Formula Frozen French Toast, a convenience food developed by Cornell scientists, was turned over to commercial production in 1962, and several new poultry products, including chicken bologna, were successfully market tested.

The hundreds of research developments at the College of Agriculture last year included a close watch on and an analysis of radiation, which led scientists to report no danger to human health from renewed open air nuclear testing. And they included the use of forty small beagles to determine whether the eating of irradiated beef reduces the chances of childbearing in humans.

Last year, entomologists probed the nature of insects and other small creatures which manufacture poison sprays and repellents. They found that cells within these creatures send harmless chemicals into mixing chambers where the combination becomes toxic. Impermeable chamber walls protect the bugs from their own poisons.

The testing of a cherry-picking machine last spring led Cornell agricultural engineers to predict that red-tart cherry farmers of New York will harvest mechanically in the near future. The successful test of this shaking apparatus, with a large vinyl and nylon-covered catching frame, is expected to help farmers combat rising wages and a dwindling labor supply.

Research on aquatic weeds

Another project called for the digging of 100 ponds to aid in the fight against underwater weeds that clog reservoirs, bog down transportation, and interfere with recreation. The ponds are being used to study the influence of light, mineral nutrients, and water depth on the development of aquatic weeds.

The expanding poultry industry has required the development of new products and marketing methods.

In many departments, scientists probed deeper into the mysteries of how proteins are manufactured in living things. Since man and other forms of life are basically protein, the researchers say these studies are vital to the understanding of how creatures of the world are formed. In cooperation with the United States Nutrition Laboratory, college scientists help purify (for the first time in history) three soluble ribonucleic acids (RNA's)—substances involved in the very formation of proteins.

Ichthyologists busy

Extensive studies of fish continued, as Cornell ichthyologists enlarged what is already one of the largest research collections of fresh-water fish in the world. Researchers re-discovered an "extinct" fish in a Maryland stream, and the microscope revealed six sets of Siamese twins in fish eggs from a South American species.

"Night people"—those who work better at night than during bright morning hours—were told that they might be more like crickets than they ever suspected. Studies of these chirping insects added credence to the belief that living creatures have internal clocks, or periodic times of activity controlled from within.

Nearly ten thousand cockroaches of forty different species were put to work to help uncover facts about evolution. And Cornell scientists also looked into the decline of sugar maple trees—no single cause, but a complex of environmental and other factors was found responsible.
Extra doses of vitamins A and D were found unnecessary in dairy cattle feed (unless grazing conditions are unnatural). Research by animal husbandry scientists showed that the adding of these vitamins by some commercial firms was not called for, and that the addition of 2,000 IU of vitamin A alone would cost New York dairymen about $500,000 a year.

Farmers and egg handlers may crack fewer eggs in the future because of research in the agricultural engineering dept. This won't be the result of stronger egg shells, but of more precisely designed handling equipment and greater knowledge of what shells can stand. Research results were charted and graphed during 1962 for future use by designers and equipment users.

Is "buzz" all they say?

Research also began work on a special room for honey bees, complete with summer temperatures and flowers. It will give them a chance to observe bees under summer conditions throughout the year. Prime purpose is to closely study the communication systems of bees, particularly communication by chemical secretions.

Tiny creatures were put to use in helping scientists battle the house fly. The researchers report that if the right mites are in the right manure at the right time, they will eat plenty of fly eggs and drastically reduce the number of flies produced.

Cornell scientists also looked to the oceans as a greater source of food for the world. A biochemist, who last year continued his studies of crabs and other crustacea, found (among other things) that the larger the crab, the less oxygen it consumes per unit weight.

A plant breeder discovered that the "blueprint" for heredity isn't quite the way it was pictured, and Cornell agronomists continued to prepare for the future by investigating the results of over-use of nitrogen fertilizer.

By putting cage henhouse light a few feet too low, many poultrymen have been cheating themselves out of valuable egg production, a study determined. A poultry specialist found that when top-deck cages are in shadow, production losses are as high as ten to fifteen percent. Also, students from many nations of the world joined U.S. researchers in seeking means of measuring the chemical make-up of live animals.

The Agricultural College and Veterinary Virus Research Institute cooperated in efforts to standardize tests for immunity in animals. In studies of canine distemper and hog cholera, the scientists found (among other things) that immunity in a vaccinated mother is passed on to her offspring who may remain immune for months.

Bacteriologists investigated the eating and excreting activities of bacteria in an effort to find means of depriving them of food. The big problem: how to starve the bacteria without harming the host animal or man.

In 1962 the Cornell scientists analyzed various soils to determine why white muscle disease in livestock occurs more in some regions than others. They came to the threshold of finding out exactly what happens to cells in mammary (milk producing) glands to make them grow and then revert to their resting state. They continued development of new potato varieties, including several with resistance to the golden nematode. And they found that water pollution may be more serious than was believed. Studies showed waste-consuming bacteria use up unexpectedly large amounts of life-sustaining oxygen in lake and ocean inlets.

Entomologists at Cornell joined those in California in studying the alfalfa weevil, and Cornell plant breeders developed a method of predicting seed usage of legume and grass years in advance so farmers will have adequate supplies when needed. Also, light-scattering techniques used to determine fat in milk were used to analyze blood for the first time.

And there was good news in 1962 for weight watchers. A low-calorie chiffon pie made of egg white was successfully market tested. Cornell developers say it contains less than half the calories of the average fruit pie.
The Experiment Station

The Cornell University has gained fame throughout the State, the nation and the world as a leader in agricultural and home economics research. This work has been done at the Cornell University Agricultural Experiment Station at Ithaca and the New York State Agricultural Experiment Station at Geneva.

The Cornell Station does not have separate physical facilities, but is an integrated part of the College of Agriculture and the College of Home Economics at Ithaca. The research programs of these units are administered through this organization. The New York State Agricultural Experiment Station has a large physical plant with many well-equipped laboratories and other facilities. It is a part of the College of Agriculture, and has administrative responsibilities to the Dean. Research at both stations is coordinated to prevent overlapping of efforts.

In 1961-62, more than $7 million was allocated for research at Ithaca, with more than $2 million being spent for work at Geneva. At Ithaca about 300 members of the faculties of both colleges spend part of their time on research, devoting the balance of their time to teaching or extension. The 80 professional staff members at Geneva devote all their time to research.

Of the money spent for agricultural research at Ithaca, New York State and its various agencies contributed 50 percent; the federal government contributed 27 percent; income to the College of Agricultu-
The Cornell University Experiment Station was founded in Ithaca in 1879, with the first research report appearing in 1880. This organization stayed in existence until 1886. It was reorganized as the Cornell Agricultural Experiment Station in 1887 following the passage of the Hatch Act, which provided federal funds for the operation of agricultural experiment stations in the various states.

New York State founded the Agricultural Experiment Station at Geneva in 1882 as an institution completely separate from Cornell. However, in 1923 the State Legislature placed the Geneva Experiment Station under the administration of the New York State College of Agriculture.

The position of director of the experiment station at the College of Agriculture was originally the responsibility of the dean of agriculture. The post in Ithaca was later separated as the dean's responsibilities became heavier, and the experiment station directorship carried with it the title of Director of Research of the Colleges of Agriculture and Home Economics.

Thus it can be seen that the Experiment Stations play a vital role in coordinating and carrying through agricultural and home economics research projects. Although they are relatively unknown parts of the University to most students, the organizations do a great deal to serve the University and the people of the State.

Agricultural researchers make use of large experimental plots in projects concerning plant growth, propagation, and disease.
Research for Consumers

"BEHIND our good fortune as the best-fed nation on the globe is agricultural research, and its manifold contributions to the nation's food supply. The vast technology that has arisen from the application of research findings is invaluable to the industries that provide goods and services for the farmer, the farm operation itself, and the businesses that take the raw agricultural commodities from the farm through the channels of processing, handling, and distribution to the ultimate consumer. It is the close teamwork between all segments of modern agriculture—the farm and its allied industries—that makes possible the economy and certainty of the consumer's food supply." — Dean Charles E. Palm, New York State College of Agriculture at Cornell University.

It is a firm fact that agricultural research benefits all. Some of the benefits are felt directly by the producers, with indirect benefits to the consumers, while the reverse is true in other instances. To give the reader a brief idea of some of the benefits of agricultural research, the following overview of some research accomplishments, both at Cornell and elsewhere, is presented.

* * *

The production of high quality food and maintaining that quality is an objective of those responsible for the food we eat, including the farmer, the processor, and the distributor. Agricultural scientists have made considerable contributions to product quality through research.

Dairy studies important

Milk is an important food commodity, particularly to New York State, where dairying is the source of a great bulk of the farm income. Improvements in handling, transporting, and processing have come about since the innovation of the bulk tank. Cornell researchers have aided in the improvement of sanitation and efficiency in bulk systems. Other research in milk quality had led to methods of improving flavor, following studies which showed that certain grasses and silages cause off-flavors in the product.

The department of vegetable crops at Cornell has done considerable research on the potato and potato products. One such project was concerned with the improvement of the quality of potato chips, with a finding that high levels of sugar in potatoes result in dark, unappetizing chips. A test was devised so the manufacturer can check raw potatoes for sugar content and thus avoid this problem. Methods of storage to minimize this problem were also developed.

Other work on the Ithaca campus includes the cooperation between Cornell, the United States Government, and New York State Department of Agriculture and Markets in testing various foods and animal feeds for the presence of chemical residues.

Plant breeding improves quality

Plant breeding is another field concerned with improving food quality. Better varieties of many fruits and vegetables have been developed by plant breeders at the Ithaca and Geneva experiment stations. that have provided the consumer with more and better products for his food dollar.

* * *

It was not long ago that apples were a seasonal fruit, and an apple in the spring was indeed a rare commodity. Through research in the department of pomology at Cornell, special methods of controlling atmosphere in cold storage rooms were developed that would keep apples fresh and firm the year round. This has not only given the consumer a break, but has increased the income of fruit farms.

Other research in the field of storage has resulted in longer life for the onion supply. The onions are sprayed with a chemical before harvesting that prevents sprouting, thus making onions available to the consumer at any time during the year.

The results of these research efforts were not realized overnight. Sometimes the efforts have continued for as long as a decade before methods were found that were both efficient and effective.

* * *

The consumer has long been used to a variety of foods, and he usually will accept new innovations. There has recently been a rapid rise in the demand for "convenience" foods, or those which require little time for preparation. Among the new convenience foods developed by researchers in the College of Agriculture are:

Sweet cultured cream, a sour cream that is not really sour. This cream can be kept under refrigeration for as long as six weeks without losing its high quality, while conventional sour cream usually is good for about a week.
The perfecting of handling and sanitation techniques of bulk milk storage and transportation has been the concern of Cornell researchers in agricultural economics and dairy science.

Calcut is a low-calorie dairy product similar to cottage cheese. It supplies most adult daily recommended allowances of vitamins, minerals, and proteins, while only furnishing 550 calories. Experimental sales on the Cornell campus have indicated wide approval of the product.

Applesauce has been given higher quality as a result of studies on the Geneva campus. Researchers found that fruit farmers would produce apples better suited for applesauce by delaying harvest for about a month.

Poultry products have assumed new forms as the result of Cornell research. Among the new products are chicken franks and chicken bologna. Cornell Formula Frozen French Toast is also a new innovation, cutting the time of making French toast almost down to nothing and containing half an egg in each slice. Eggs without shells are another new item, along with a special "Kid's Pak" of small eggs, packed especially for children. Among the most famous of the Cornell-developed food products is the chicken barbecue sauce, which has been the basis for the popularity of barbecues in many parts of the State.

The tangible results that have tied together the vast areas of agricultural research directed at finding more and better products is our national food supply and the most of food to the consumer. Despite inflation, food is still the consumers' biggest bargain. True, the price of food has risen, but it has not risen as fast as either the general price level or the income level.

Agricultural research does not stop with the discovery of better food products. This alone has not brought about the vast benefits of research to the consumer. It is here that research in agricultural economics, particularly farm and business management, has played a vital role. Likewise, research in the marketing and distribution of food have bridged the gap between the farmer and the consumer. Cornell research has contributed much to the modern-day supermarket, its physical aspects and its marketing methods, as well as training many of the executives of the dynamic food retailing industry.

If it were not for these advancements in the general field of economics, Americans would either be spending most of their income on food, or would be forced to live mainly on a diet of cereal grains.

Through experimenting with various animals, agricultural research at Cornell and other experiment stations, the USDA, and private laboratories, has opened many doors to better health for all mankind. Agricultural research has led to the prevention of goiter by the addition of iodine to the diet. The necessity and functions of the vitamins, particularly Vitamin K and Vitamin B-12, were found through studies conducted by agricultural scientists.

Perhaps one of the greatest steps in modern medicine, the use of antibiotics, owes much to agricultural research. The organisms which produce antibiotics were first found in the soil by agronomists at state experiment stations. Some of these combat disease and kill harmful bacteria, while others have had direct use in agriculture by stimulating the growth rate of meat-producing animals and bettering feed utilization.

Research in animal nutrition is being carried on that may eventually establish the relationship between diet and disease, particularly heart diseases.

The lands and forests of New York State might be considered a non-agricultural domain, but they are playing an increasingly important role in research. Water supplies, for example, have their sources in forests and wild areas, and the future adequacy of these supplies is of concern to Cornell researchers. Factors that influence the loss of valuable water to evaporation, transpiration, and runoff are being studied, and work in economics and policy is attempting to deal with landowner organizations in water supply development.

Research on fish and wildlife

Equally important are fish and wildlife. The habits of wild animals are under study by researchers in the department of conservation, and Cornell is making its contribution to the new and expanding field of fishery biology.

Conservation and effective resource use by the State's farmers is another matter of vital concern to researchers. Inexpensive methods of developing farm ponds and stocking them with fish have been discovered. Management of farm woodlots, maple syrup production, and the raising of Christmas trees are all concerns of Cornell foresters.

With the expanding population, recreational use
of wild areas has gained in importance. Land which 
onece was used for agriculture, but abandoned because 
of low productivity, is a source of recreational land. 
Cornell researchers are studying the problem of proper 
development of these lands.

The classification of land in the State is also 
part of the Cornell research program. This information 
is not only helpful to farmers, but is used by engineers 
and contractors.

Agricultural research that is valuable to the home-
owner concerned with producing high quality, weed-
free lawns, or productive home gardens, has not been 
forgotten by Cornell scientists. Through extension bul-
etins and aid from county agricultural agents, home-
owners can profit from the results of Cornell research 
in turf production, vegetable and fruit crops, and 
floriculture. The control of insects that affect the 
health and welfare of homeowners throughout the State 
has been the subject of much research in the depart-
ment of entomology.

The area of social problems and effective com-
munity living has also come under the realm of agricul-
tural research in recent years. Rural sociologists 
in the College of Agriculture have studied such prob-
lems as the effectiveness of organizations in rural com-
munities, community cooperation, group relations, and 
the care of the aged. Work in rural sociology has gone 
far beyond the borders of the state also; research in 
community development has laid the foundations for 
the development of prosperity under democracy in 
many foreign lands.

Applied and basic research important

This brief summary of agricultural research has 
shown the benefits derived by the non-agricultural 
sector of our economy from the scientific investiga-
tions at agricultural experiment stations.

What has not been shown, however, is the im-
portance of applied research to the farmer and others 
directly involved in agriculture. The value of this work 
to the economy cannot be overestimated, for the farmer 
is the first step in the chain of production as food 
products move to the consumer. Research has paved 
the way for the development of farming from a subsis-
tence occupation to the modern commercial indus-
try it is today.

Likewise, basic research is of vast importance. 
About one-third of the research in the College of Agri-
culture is basic in nature; that is, its objective is to 
supply new information that may have no immediate 
application, but which contributes to total knowledge. 
For example basic research projects have included work 
on photosynthesis, genetics, physiology of plants and 
insects, viruses, the biochemistry of plants, proteins 
and amino acids.

---

A researcher checks the functioning of the liver of a dog that 
has been fed radioactive material.

Thus it can be seen that agricultural research has 
a broad base and even broader applications. To repeat 
the introduction to this article, agricultural research 
benefits everyone.

LOOKING FOR THE FINEST IN PRINT?

You'll find it at—

NORTON PRINTING CO.
317 E. STATE ST.
Ithaca AR 2-7800

"Printers of the Cornell Countryman"
AGRICULTURE is a major component of the economy of our country. Farming itself is a billion dollar a year industry in New York State. The allied agricultural industry, which includes the equipping and supplying of farms with machinery, seed, feed, fertilizer and other needed materials, the marketing of farm products, and the retail sale of food products is a $10 billion industry in New York State alone.

Agriculture is commercialized

In agriculture there is and has been for the few past years a transformation of the small self sufficient farm with its small production to the large more economically run farms concentrating on one or two food products.

In New York State as in the United States the ability of the economy to market farm products has not kept up with the ability of the farmer to increase the size of his harvests.

Thus it can be said that the research being done on the plants and animals themselves to increase the yield has had more success than the research done in the field of marketing. The opportunity and need of more work in this field of agricultural surpluses and the moving of such in the markets of the world is one of the most complex and rewarding for any student who is so oriented.

The New York State Department of Agriculture and Markets is basically a service or regulatory agency dealing with all aspects of agriculture from the preparation of the seed bed to the ultimate consumption of its products, and for the health and productiveness of its animals. This is done primarily by inspection, investigation and dissemination of the facts as proven by agricultural research workers in each particular field. The laws and regulations which the departmental employees enforce have the basis of research. This keeps our agriculture in the fore, as being the best for the grower and the consumer.

This protection against fraudulent operations which both the consumer and grower demand is a service that many take for granted. How many realize the importance of the inspection and investigation of our dairy cattle by department employees, which protect this largest of agricultural industries in our state?

The resulting milk, the most healthful in the world, would not be possible without the cooperation of extension, the farmer and regulatory personnel basing their work upon research.

The constant inspection of the seed being sold in New York State, prevents the dumping on our markets of poor, mislabeled or misrepresented seed which could result in financial loss for both the grower and consumer. The inspection together with the testing as done by the Seed Division of New York State Experiment Station at Geneva has been one of the main reasons for the increased production of our farms.

The plant law was amended in 1960 to require the registration of over 2200 nurseries in the state to allow for closer control of the spread of insect pests and diseases in the movement and sale of plant materials. Research workers in entomology and plant pathology are constantly improving the methods and treatments for the control of these plant pests.

The control of pesticides is a concern of the State Department of Agriculture and Markets. Here is a modern air blast spray rig on a State fruit farm.
Inspectors of the State Department of Agriculture and Markets check a recently packed lot of apples for the presence of disease.

It is now reasonable to expect that through methods and materials developed by research that the Alfalfa Snout Beetle will become an agricultural pest of the past. Some twenty years of regulations to hold the insect within bounds has paid off and research has now shown the way to complete control.

The benefit to the economy of the state and need for close cooperation between the government with its financial resources and the researchers with their work is aptly shown in the case of the Golden Nematode of potatoes. This introduced pest which threatened to destroy the potato industry of Long Island was brought under control as a result of research work done by Cornell.

Control Golden Nematode

There has been a $300 million potato production on Long Island since 1941 when the Golden Nematode first became a threat and during the same time 2.5 million dollars has been spent for working out its control. This success would not have been possible in keeping the pest from other potato growing areas of the country without this recognized cooperation of research and regulatory personnel.

Pesticides is one of the fields in which the department has kept a close watch. A recent revision of the law governing the sale and registration of pesticides in N.Y.S. uses research by the chemists involved in this field as a basis of regulations to protect the user public.

Therefore it is no accident that a large percentage of the Department of Agriculture and Markets personnel are graduates of the colleges of agriculture of our country. These people have found that they can fulfill their desire for a better agriculture by working in a regulatory area, based upon solid research.

---

National Master To Visit Grange

CORNELL’S student organized Grange will be honored by a visit February 12 from the National Master, Herschel D. Newsom. Mr. Newsom and Russell Curtiss, Master of the New York State Grange, will address the local organization, after which a reception will be held.

Newsom is an Indiana farmer and has been Master of the National Grange since 1950. He is widely known in Washington and throughout the nation for his understanding of the complexities of the farm problem. Included in his visit to the Campus will be conferences with Dr. Charles E. Palm, dean of the College of Agriculture, and Prof. A. A. Johnson, director of extension. He will also meet with Grange officers, State Extension personnel and a representative of the Sears Roebuck Foundation to discuss the Grange-Sears Roebuck Community Service Program. It is hoped that these programs will be increased both in quality and quantity through cooperation among these groups.

In other Grange news, Harry L. Graham, a member of Cornell Grange, has recently been appointed assistant to the National Master for the North Atlantic States. He is currently traveling throughout the State presenting the Grange Dairy Proposal. This proposal, which originated in the Tompkins County Pomona Grange, has been adopted as official policy by both the State and National Granges.

The plan, which is rapidly gaining public support in the State, provides for a two price payment system for market milk, with production quotas. Dairymen under the proposal would be paid one price for the milk sold for fluid consumption, or Class I milk, and a lower price for that sold for manufacturing purposes, or Class III milk.

At the present time, dairymen are receiving a uniform blended price for their milk, based on the average prices paid for all milk. This gives producers a deceiving picture of actual market conditions, whereas under the Grange Proposal, they could see what percentage of their milk was utilized for fluid consumption and what was used for manufacturing, and be paid accordingly.

It is planned to have an open meeting of the Grange this spring on the Cornell Campus, at which time Graham will present the proposal for discussion.
The Thankful Heart

(With a discussion of the fruitful results of agricultural research, it must not be forgotten that America is prosperous not only because of her technology, but because of her resources. It is in this spirit that the following was written by the late Dean Liberty Hyde Bailey many years ago.)—Ed.

FULL of pride are we in our abounding crops. We are almost boastful that we can produce so great quantity, and that the nation can inventory so much wealth thereby. It is good to see the granaries full, the bins bursting, the storehouses laden and the barns packed to the beams. We read the figures with much satisfaction. We attain to mastery and we express our power. It is our high ambition to make every new year more productive than the old.

* * *

YET, in the end, that people will conquer and that industry will survive that puts the most art and feeling into its efforts and its products, and the mechanical quantity-production, no matter how honest and "efficient," will fall into subordinate place. The quality of the product is verily more important than its quantity, because it expresses the soul of the producer; and even in a commercial age, the spirit will hold the leadership. To be keen in the appreciation of the beauty in the product is to exercise the highest privilege of any craftsman, whether farmer or artisan; and if one sees the beauty one perforce is thankful.

* * *

TO be thankful for the products of the year, therefore, is not merely a courteous and pious demeanor; it is a necessary result of satisfactory living. In these bountiful days we do not need to return thanks because we have not starved; we need to be thankful that we have known the joy of the earth and that we have seen the miracles come out of it, that we have been filled with the beauty. Let us, then, in due decorum appraise the beauty in an apple, the perfection in an animal, the harmony in the products of the land. We cannot do less than this. We may wish that all men shall similarly be blessed. Our hearts may be full of thanksgiving and prayer.

Liberty Hyde Bailey.
Consumers Benefit From Agricultural Research

The high standard of living the American people enjoy today is supported and maintained through agricultural research. Never before has the working man spent so small a proportion of his working day earning the food he and his family eat. In 1914 when bacon cost only 27¢ a pound the working man had to work three times as long to get a pound a bacon as he does today; two and one-half times for a loaf of bread or a pound of beef—still longer for a pound of poultry.

It is indeed a paradox that while we in the United States have an abundance of wholesome, inexpensive food, two thirds of the world’s population go to bed hungry or inadequately nourished. Everyone agrees that it is wasteful to continue to produce more agricultural products than we can consume but is curtailing production research the answer? Or, should we be searching for better ways of capitalizing upon our efficient agricultural industry?

Rather than lose the tremendous advantage we have in agricultural production let us explore ways of using “Food for Peace” for better distribution of the food sorely needed by people in other parts of the world. At the same time we should continue to search for ways of bringing agricultural production more in line with our needs without creating an inefficient and weakened industry. Food is also a strategic weapon for defense.

With the net gain in the United States of 7,100 new mouths to feed every day, it is easy to visualize increased demands for food. A conservative estimate places our population at 225 million people in 1975 (12 years hence). Most of the war babies are now teenagers and it is impossible for anyone to imagine their capacity for food unless he is feeding one, especially a boy. It is obvious that our increased population will require appreciably more food even to maintain our present nutritional standards. And as our desires for high quality fruits, vegetables, and animal products increase, the demand will be even greater. Agricultural research will make it possible to meet these demands.

New York State College of Agriculture
at Cornell University
NEW BROCHURE
WORLD AGRICULTURE
OUR CHALLENGE

The role of the College of Agriculture at Cornell in the development of agriculture internationally is told in a new publication, "World Agriculture—Our Challenge."

Prepared for distribution in the U.S. and abroad, the brochure shows the crucial role of agriculture in the developing countries and ways in which the College contributes to the solution of some of the problems.

The 44-page publication includes 71 pictures illustrating some of the 89 countries where 160 active and emeritus professors now in the College and its experiment stations have served as advisors and teachers in the major areas of animal, biological, plant, physical, and social sciences.

It is pointed out that while the U.S. may help meet the increasing demand for food in several countries for a time, eventually these countries will have to depend more on their own resources. The need for animal protein in the areas without enough food is four times the amount the U.S. exports annually and 50 per cent more than total U.S. annual production.

Cornell’s interest in global agriculture has a long history. Records show a Russian student was enrolled in 1868 in the first class in agriculture. Eight years later, 17 students from 11 countries were enrolled. At the present time, 248 graduate students from 59 countries and 70 undergraduate students from 28 countries are studying in the College of Agriculture.

Through pictures and text Cornell’s response is shown to requests for agricultural assistance from the developing nations.

As early as 1906, two members of the faculty went to China to work for one of the provincial governments. In 1925 pioneer efforts toward increasing China’s food supply resulted in establishment of the Nanking Cooperative Crop Improvement Program with Cornell’s department of plant breeding.

In 1942, the Inter-American Institute of Agricultural Sciences was established in Costa Rica with many Cornell scientists serving on the staff. From 1952-1960 Cornell had a close partnership with the College of Agriculture of the University of the Philippines at Los Banos.

And the College is now participating in a program with the University of Liberia to assist in raising its standards of higher education.

To quote from the text: “Most of the nations in the world have benefited by, and in turn have benefited, agricultural education at Cornell. The continuing service of faculty members abroad...the exchange of information through periodicals...and exhibits at international fairs help to maintain the cooperation established almost a century ago.”

COVER: Training personnel in research and distributing food in India are only two aspects of our challenge in world agriculture. The design indicates Cornell’s global activities in meeting this challenge.
A New Director
And
A FOURTH DIMENSION

Director, International
Agricultural Development

On February 1, Dr. K. L. Turk, an international authority in animal husbandry, became the first Director of International Agricultural Development in the College of Agriculture at Cornell. It was the first appointment of its type in any college of agriculture in the U. S. land-grant university system and added a fourth dimension to the three long-time directorships in resident instruction, research, and extension.

Dr. Turk, head of Cornell's department of animal husbandry since 1945, will also continue in that position until a new head of the department is selected. His appointment as director is for two years, after which he plans to return to research, teaching, and writing in the department of animal husbandry. He is retaining his professorship in the department.

The new director is responsible for coordinating the diverse and growing international development activities of the College of Agriculture and its Experiment Stations. He will also administer and expand the support of programs that can be financed by Federal and private foundation funds and integrate international agricultural development programs with the Cornell University Center for International Studies.

Governor Nelson Rockefeller and the New York State Legislature recognized the importance of international agricultural development by providing funds for the new directorship and additional support for the program this year. With its integrated, interdisciplinary resources, the program will insure the comprehensive training of U. S. and foreign students for work in international agricultural development, including related research in the social and biological sciences. For the last half century there has been a steady increase in the number of foreign students and fully one-third of all the foreign graduate students at Cornell are enrolled in the College of Agriculture.

In addition, further direct cooperation with foreign universities is expected to be undertaken. For example, the College of Agriculture at Cornell and the College of Agriculture of the University of the Philippines are now exploring the possibilities of another cooperative project. Negotiations are in progress between Cornell, the Ford and Rockefeller Foundations, the University of the Philippines, the Philippine government, and agencies of the U. S. government for the development of a graduate training program in the College of Agriculture at the University of the Philippines. The college's most comprehensive international agricultural program was undertaken in the Philippines during 1952-60 under the Cornell-Los Banos contract.

Dr. Turk has traveled and worked around the world as a leader in research, a teacher, and a consultant in animal science and related fields. Last summer he was a consultant for FAO in Mexico. From 1957 to 1962, he served as a member of the Board of Consultants for Agriculture of the Rockefeller Foundation. This work took him to Mexico, Honduras, Costa Rica, Guatemala, and most of the countries in South America.

In 1954-55 Dr. Turk served as visiting professor of animal husbandry at the College of Agriculture, University of the Philippines, under the Cornell-Los Banos contract. In the course of his travels to and from the Philippines, he observed and studied agricultural conditions in Japan, Indonesia, and many other countries of Asia and the Middle East.

During the spring and summer of 1951 he was on sabbatical leave and made a travel study in Great Britain and Europe of the important breeds of dairy cattle and other livestock. Another sabbatical leave in 1959-60 was spent in helping plan livestock research programs in several countries in Latin America.

Professor Turk was a Cornell staff member from 1934 to 1938 when he went to the University of Maryland as professor of dairy husbandry, becoming head of that department in 1940. He was recalled to Cornell early in 1944 to take charge of teaching and research with dairy cattle.

Dr. Turk has taken a prominent part in the American Dairy Science Association, serving as president in 1958-59, and the American Society of Animal Science. He is a member of the following honorary and scientific organizations: Alpha Zeta, Gamma Sigma Delta, Phi Kappa Phi, Sigma Xi, and the American Society for the Advancement of Science.
American universities have taken on a new and important dimension through programs in education, research, and extension in other countries of the world and in the training of foreign students on their campuses. Investing in people of the emerging nations through education in its various forms is one of the most effective procedures that can be used to provide long-time and lasting aid. Moreover, it contributes to good international relations and understanding. Thus we help the people of these countries to acquire the knowledge and skills they need to solve their own problems and to develop their agricultural industries and general economy.

The new dimension of American universities is described by the Committee on the University and World Affairs as follows:

"In this new setting, the greater concern of American universities with world affairs is but an appropriate educational response to matters of paramount concern to the individual American, to the nation in its new role, and to men everywhere. To a greater degree than ever before, world affairs are American affairs, and American affairs are those of the world."

American universities that have accepted this new responsibility in the training of citizens have had to widen their scope. These new demands have been like the sound of many fists knocking on college doors to open them wider—knocks made with utilitarian fists. They indicate the needs of students preparing for overseas positions in countries all over the world, competition of agricultural products in the world market, new problems faced by the formation of the Common Market in Western Europe, and the appearance of new markets in heretofore little known areas of newly emerging nations of the world.

The more subtle knocks on the college door come in less tangible forms: the increasingly urgent need for students to know and understand the international aspects of their specialization, along with community and state needs for educated citizens with broad understanding and awareness of international affairs; the need for students to realize that many major problems in their fields of specialization exist also in other environments and societies; and the need to understand the basic and fundamental interrelationships of science and scientific methods in plant and animal improvement.

Knowledge gained through scientific research in agriculture has no bounds. Regardless of the country from which it comes, new knowledge is beneficial to the American agricultural economy. Think for a minute about the benefits that have accrued to mankind everywhere from Pasteur's...
work in microbiology and from Mendel's classic experiments in Austria that marked the beginning of our modern understanding of genetics. Who knows when similar and equally noteworthy contributions may come forth from the minds of scientists now being trained to help the less developed countries of the world.

Cooperative plant breeding programs and the interchange of germ plasm between scientists in the northern and southern hemispheres, and in the western and eastern areas of the world, are greatly reducing the time required to develop improved varieties. Such cooperation makes possible many new and superior adapted strains. Many of the crops important in American agriculture owe their origin to other countries. Selected locations in many countries abroad provide opportunities for screening plant materials for disease and insect pests that might devastate crops in the United States if allowed to gain entrance.

What kind of a livestock industry would we have in the United States today had we not imported foundation stock of important breeds from Great Britain and Europe? Relatively few breeds of livestock of economic importance have originated in the United States. We have gained much from other countries, and they gain from us.

In every area of agriculture, an off-campus project, or an overseas educational and research base, provides students and faculty alike an opportunity to gain firsthand information and knowledge that cannot be duplicated in the same significant measure at home or from the literature. Research in foreign agriculture is essential and is being carried on as an adjunct to current projects here at home.

Such activities enrich the quality of both teaching and scholarship. They prevent provincialism in the realm of ideas and bring students, teachers, and research scientists into contact with the rapidly changing world. This is vital to the New York State College of Agriculture and to the citizenry of the state, who constantly must strive for greater understanding of the forces underlying worldwide changes.

What is good for the nation is good for New York. The developed countries are our best customers. And the underdeveloped countries offer huge markets for our products in the future. Dr. A. T. Mosher, Director of the Council on Economic and Cultural Affairs, sums it up succinctly: "For in today's world, there can be no viable agricultural policy for America that is not consistent with the needs, the changing patterns of production and distribution, the aspirations and the population growth of countries old and new, around the world."

Graduate students from many nations of the world combine their research efforts with those of College of Agriculture professors. In one project of worldwide importance, for example, graduate students representing seven nations are seeking ways to measure the chemical makeup of live animals. This research involves milk consumption which will be of value to New York milk producers if the present system of paying farmers for milk on a basis of butter-fat is discarded in favor of paying on a basis of protein content or solids-not-fat.

Shown here with Dr. J. T. Reid, the Cornell professor who heads the research project (left), are (standing left to right): Oswaldo Paladines of Ecuador and Dr. Andre Bensadoun of France; (kneeling), In Han of Korea.

DuPuits alfalfa (above), bred in France and Belgium, accounted for one of the state's most significant crop variety changes in a decade.

From certain genes found in Colombian and Peruvian wild potatoes, Cornell plant breeders have been able to develop potato varieties (example above) resistant to the damaging golden nematode disease. This is another example of the value to New York farmers of international work.

Millions of pounds of dried milk from New York and other states are sent each year to hungry children and their families in developing countries. Shipments of dried milk and other foods make a huge market for U. S. farm products.
BUILD A CAREER WITH G.L.F.

what G.L.F. is: Farmers cooperative, with executive and general offices in Ithaca, N.Y. Five hundred retail outlets and franchised dealers; 40 manufacturing plants and warehouses in New York, New Jersey and northern Pennsylvania; 4200 employees in 11 divisions and general offices.

products and services: Feeds and fertilizers, seeds, pesticides and farm chemicals, farm hardware, lawn and garden items, and petroleum products. Service to farmers and rural home owners, such as bulk feed and fertilizer delivery, and oil burner installation and maintenance. Marketing of eggs, poultry, grain, beans and a variety of other commodities for the northeastern farmer.

positions available: Managerial: retail outlet management, petroleum plant management, and egg processing plant management. Opportunities for advancement to territory and division management positions.

Sales and Technical Service: retail outlet salesmen and sales managers. Opportunities for advancement to territory salesmen, sales managers, division sales managers' positions. Technical field service work requiring specialized training in certain phases of agriculture.

Staff Departments: accountants and auditors to enter the Controller's Department; occasional openings for people trained in advertising, industrial engineering, and agricultural research; occasional openings for chemists and bacteriologists in the cooperative's quality control laboratories.

qualifications and training: Each year G.L.F. hires 4-year and 2-year college graduates for placement in training programs in retail management, egg plant management, sales, and accounting. On-the-job training is the basic method followed in these programs, supplemented by special schools and conferences.

for an interview: G.L.F. representatives will hold interviews at Cornell on Thursday, March 14 and Friday, March 15. For an appointment contact Professor Howard Tyler, 192 Roberts Hall, AR 5-4569.

COOPERATIVE GRANGE LEAGUE FEDERATION EXCHANGE, INC.
Terrace Hill
Ithaca, New York
Less than five centuries ago the Americas were yet to be discovered. Soon the citizens of the Old World would venture across mystifying waters to find a land of plenty. They would encounter vast forests, rolling hills, abundant waters, and a new race of mankind, and would introduce many changes into the Old World. One of these changes would be the use of native American foods.

Foods unknown to Europeans before 1492 became common on their dining tables two centuries later. Such foods as potatoes, beans, vanilla, cashew nuts, tapioca, maize, pumpkin, squashes, peppers, pineapples, clams, and turkey had neither been seen nor tasted by the people of Columbus' generation; yet today many of these native American foods are European staples.

To visualize Ireland, Germany, and most of Europe without potatoes, or Italy without tomatoes is indeed difficult because the tomato has become so typical of Italian food, and the potato so universally used. Their American heritage has drifted into the silence of the past.

Paradoxically, maize and pumpkin have maintained such a strong affiliation with America that their extensive use in other countries is seldom realized by Americans. The pineapple, associated with tropical American islands, is widely used in Oriental cookery; maize, an important crop in Australia, New Zealand, Africa, the Philippines, Java, China, and Japan, travels incognito under such names as Spanish corn, Egyptian corn, Turkish wheat, and Syrian corn.

The association of certain foods with American customs links them with the New World. The turkey, originally from Mexico, is the only animal native to America and not to the Eastern Hemisphere. The pumpkin is native to Peru. Both are often connected with the New World through their roles in the Thanksgiving Day feast, an Indian ceremony of gratitude for a plentiful harvest, which the Pilgrims continued.

Having saved the early settlers of Jamestown and Plymouth from starvation during those first strenuous years, corn or maize is also part of our American heritage. Believed to have originated among the Indians of Peru, it spread from Peru to all of South and North America before 1492. The Indians roasted, popped, ground, and ate this "grain of the gods" as hominy, which leaves corn flakes as the only new way we have discovered to serve it.

Unlike corn, the sweet potato was not widely used among the Indians, and is not as widely used today in America. Columbus took it from Baham to Spain, and it spread to Italy, Belgium, Vienna, Germany, and in 1565 to England, where it was readily accepted by the wealthy as a delicacy.

The Indians of Central America domesticated the tomato. In the early 16th Century, its seeds were taken to Europe, where the plant was raised for decoration and later the early colonists brought it to Virginia for their flower gardens. Since tomatoes are members of the nightshade family, all white men considered them to be poisonous, and it was not until after the Civil War that people in the United States would eat them. Because the Italians grow them to perfection, they are often linked with Italy.

Similar to the development of the tomato, is that of the "Irish" potato, a native of Peru or Chile, which was brought from South America to Europe by the early explorers, and then to North America by the settlers. About 1520, the Spanish explorers introduced this strange root to their countrymen, who brought it to Florida in 1660. In three years the potato had spread along the coast, and John Hawkins, or some believe Sir Francis Drake, gave it to the English, who refused to eat it. It became so popular with the Irish, however, that in 1771 the English began to eat these "Irish" potatoes, and brought them to North America.

Before the discovery of the Western Hemisphere, the only beans known in the East were the broad beans of England and the soy beans of the Orient. Today, lima, string, white, waxed, and kidney beans have lost their South American origin in worldwide cultivation. Nutrient value, storage facility, and variety made beans an invaluable nourishment for sailors and travelers, who also left them behind in the myriad of places they visited.

Although cashew nuts originated in Brazil, over 90 per cent of their present production is in India and East Africa; and in spite of their names, the red Spanish peanut and African peanut are native to Colombia.

Today, although maize, pumpkin, and turkey are considered traditional American foods, there are many other foods which originated here. Europe's adoption of these foods, however, was so complete that origin is now forgotten and her dining tables are greatly enriched.
HIGHLIGHT YOUR LIFE THROUGH TRAVEL

by Robert Davidson ‘63

Vacations can be more than most people make them. We use travel as a means of relaxation and a change of scene; but without losing these basic advantages, a trip can easily provide more enduring rewards: it can offer us experiences which make our lives more meaningful.

These experiences are of varied character and intensity. They may be moments of tranquility or excitement. Or, having a deeper effect, they may become forces which inspire you or which produce greater knowledge of yourself and the world. Naturally, individual moods and preferences vary, but here are a few examples from the travels of this writer. You may have shared the same or similar experiences.

Restaurants have often provided memorable settings. High in the hills of the Vienna Woods, for example, is a spot where one can dine overlooking the lights of the city. You drink strawberry champagne while a violinist plays The Blue Danube. On the other hand, if you travel a rarely-used road in the Ozarks of Missouri, you can find refuge from the blistering sun in an immaculate and comfortable home where the cheerful proprietress begins each meal with all the hot rolls and honey you can eat. In Copenhagen, one well-known headwaiter greets you at the door with a sandwich menu no less than four feet long! Each item is better than the last. And near the Plaza Mayor in Madrid is a spot which Hemingway frequented. The specialty of the house is cold garlic soup. I cringed, too! But once you taste it, you'll keep trying to find it elsewhere—and rarely will.

Maybe you're a confirmed people-watcher. There are many excellent areas where the sport is unusually successful. Times Square around eleven at night is brighter than most cities are at noon. And the people! You'll see every size and description. America is the melting pot of the world; New York, of America; and Times Square, of New York. Airports are also good; I prefer O'Hare, in Chicago, because it is busy and concentrated in a relatively small area.

Do you enjoy panoramic views? It is hard to surpass the spectacle of Los Angeles at night, seen from the Hollywood Hills. Lights stretch across the horizon in a seemingly endless expanse. The picture is massive and cannot fail to impress the observer. Further north, in San Francisco, you can take a free ride to the top of the Fairmont Hotel in a glass elevator which ascends the outside of the building. As you go up, the entire Bay area unfolds beneath you.

You may, instead, prefer to concentrate your attention on the more definable limits of individual buildings. Churches, despite the typical tourist's complaint that he sees too many of them, offer a diversified range of experience in architectural viewing. There is the graceful elegance of Notre Dame in Paris, the incredible immensity and ornateness of St. Peter's in Rome (you feel minute when you enter!), and the serene simplicity of England's Salisbury Cathedral. The world is full of outstanding examples of these and other styles of architecture. You won't forget, either, the gigantic Edinburgh Castle, which looms ominously over the city from a hilltop.

Photographs on these pages by courtesy of Scandinavian Airlines System, Inc.

“The Beefeater,” traditional guard of the Tower of London in his historic garb.
You may be mystified by the island abbey-fortress of Mont Saint-Michel, with its mysterious chambers and secret passageways. You may be inspired by Le Grande Chartreuse, the monastery in a mountainous and isolated region of France, which, besides producing a famous liqueur, has enthralled countless artists and writers throughout the years. Or you may be startled by the severe contrasts in Stockholm's City Hall. It is austere, stark, and spare from without; but you enter into the Gold Mosaic Room, one of the most blindingly brilliant displays of color ever conceived.

Even a beach can be more than just a place to relax. On the Isle of Capri, near Naples, you can dive from smooth boulders into a sea that is always a perfect temperature. Or at Estoril, in Portugal, you will bask on an endless expanse of fine, white sand and gaze at rows of deeply colored flowers in front of elegant resort homes. And in Cannes, on the Riviera, you can find a beach that provides mattresses, umbrellas, and for $1, the largest, most delicious fresh fruit salad you may ever enjoy.

Streets, too, can assume a kind of personal character. There is the pulsing, exciting Sunset Strip in Hollywood. There is New York's Fifth Avenue and Old Bond Street in London with their aristocratic retail establishments. There are the streets of Monte Carlo, crammed with the sports cars of the International Set; the “streets” of Venice, filled with gondolas; and the streets of the old French spa, Aix-les-Bains, lined with the stately hotels of yesteryear which live on in decaying grandeur.

For the adventurous, there are thousands of nightclubs in the world, and some of them are memorable. The Lido, in Paris, produces a floor show that is a spectacle of light and color. The stage is successively transformed by props, fountains, and even by an icerink. Quite a different atmosphere is found at Pat O'Brien's in New Orleans' French Quarter. A kind of esprit-de-corps unites groups against one another as the talented pianists lead them in songs of their respective cities, colleges, and areas of the country.

I remember Madurodam Park, near Rotterdam, which contains a complete city, accurately scaled down so that, walking through it, you feel like Gulliver in Lilliput. Many of the world's well-known buildings are reduced to scale, and there is even a tiny harbor and shipyard. The very fact of Rotterdam's existence today, literally risen from the ruins of war, is an inspiring monument to human faith and industry. Neither can I forget the Lincoln Memorial in Washington. The man who has become an incarnate symbol
of America's greatness is so effectively sculpted that his face seems more of flesh than of stone.

Your memories will often form into a kind of vignette, a frozen and indelible picture which symbolizes the beauty of a particular experience and which can come to symbolize the beauty and meaning of life itself. A picnic in a Swiss Alpine meadow overlooking a mountain lake. Fishing boats in the harbor at Volendam with their white sails and black netting sharp against the sky. The English Channel on a foggy day when the sea and sky form a kind of wall into which the deep-green coastal hills descend. A moment at night on the highest point of the world's smallest republic, San Marino: the Adriatic and its glittering resort towns far below, mountains surrounding, a cool breeze bringing music from a distant café, and nearby, an ancient castle silhouetted in the moonlight.

The more you travel, the more you will have to remember. It isn't necessary to go with specific experiences in mind or to work hard at finding them. All you need is a basic awareness of the world around you.

Of course, much will depend on your preferences and state of mind, your degree of romanticism or pragmatism, the weather, your companions, and how much you slept the night before. But there are highlights everywhere for everyone. Take a trip! Then compose your own list.
ALUMNI ASSOCIATION
STUDENT RECRUITMENT
ACTIVITIES

The undergraduate enrollment picture in the College of Agriculture was not especially bright in 1956. The enrollment of 1,575, was approximately the same as it had been in 1948. However, total applications had decreased from 1,607 to 1,100 in these same years. It was estimated that the existing faculty and facilities were adequate to accommodate an additional 400 undergraduate students. The College of Agriculture was not keeping pace with a growing University, but much more importantly it was not keeping pace with the ever growing demand for college-trained personnel in agricultural professions. The Alumni and especially the Executive Committee of the Alumni Association viewed this with alarm. Concern was followed by action.

Gradually County Alumni Committees were organized in scattered areas throughout the State for the purpose of disseminating information about the College to these people. On February 1, 1957, a letter from the Executive Committee of the Alumni Association was sent to Alumni throughout the State asking for their help in recruiting students. These were the early beginnings of the recruitment activities of the Alumni Association.

Through the efforts of A. W. Gibson, who was then Director of Resident Instruction, a Field Representative for the College of Agriculture was appointed in September 1957. His job was to inform high school students and their parents and guidance counselors about the College and to work with the Alumni Association in their recruitment activities. The Field Representative’s work proved to be of a great help in organizing the Alumni efforts throughout the State.

In the 5 years since the beginning of the recruitment activities of the Alumni Association, this organization has rapidly developed until today it is well organized throughout the State.

The present organization is now organized on a regional, county, and local basis. Regional Representatives head each of twelve geographical regions and there are County Chairmen for fifty-eight counties. Several Alumni Keymen are assigned to represent the College at the high schools in each of these counties. All counted, there are about three hundred Alumni working in this activity throughout the State.

The word “recruitment” does not really describe the purpose of this organization, but it is used for lack of a better one. The purpose of this organization actually is to point out the educational opportunities available at the College of Agriculture. It is the philos-
INTERNATIONAL UNDERSTANDING:
The Foreign and American Student

by Dorothy Gay Martin '63

International understanding is a phrase often repeated in this shrinking world. These two magical words are used most often when we speak of improving negotiations and attaining world peace. But the stress is placed on other countries in gaining a world understanding. Student exchange programs, foreign travel, studies abroad are encouraged to promote international understanding among the American college students, the nation's leaders of tomorrow.

What does the student from another country face in entering a college or university in the United States, particularly Cornell University which ranks among the top five universities having the largest foreign student enrollment proportionate to the total student body? He is confronted with the provincial student who is uninterested in his presence, and the prejudices of some students against the different races. All too soon he realizes the strong differences in boy-girl relations. The Cornell coeds often desire the friendship of the foreign students, but they are not interested in a romance, particularly when it involves a difference in color between them. Other basic problems include the change of climate and food: the tropics are quite different from Ithaca.

The foreign student is confronted with many emotional problems. He suffers the common pitfalls of disapproval, disappointment, and rejection, and he is under greater stress by being in another country where emotions and temperament differ. He is expected to keep pace with his American brothers in a language different from the English learned at home, often called Americanese in many countries. There is greater pressure on academics when the family, community, and possibly the government are counting on the knowledge he reaps in the "land of opportunity."

While the American student is encouraged to include activities and social functions in his formal educational training, the foreign student is here to learn his subject matter and to learn it well. This is even more evident at the graduate level and is especially true at Cornell where the foreign graduates outnumber the undergraduates three to one. These and other differences make the working of an international program difficult. Even with the culture barriers of Asian and African countries, students continue to come. Cornell had an increase of 104 in foreign student enrollment this year.

Orientation of students from other countries is a fulltime program at Cornell University. The first persons the foreign student meets at Cornell are those in the International Student Office. As described by the director, "This is the listening post for every foreign student." Mr. David B. Williams, director, and his able staff composed of an assistant director, Mr. Mehdi Kizilbash; an administrative secretary, Miss Elissa Olevano; and a secretary, Mrs. Mary Pinto, cope with many problems. In their small office they deal with administrative problems, work with academic difficulties, coordinate the campus and community programs, and most important they advise the foreign student on any and everything.

The orientation program is planned by this office and begins nine days before classes resume instruction for the fall term. The foreign students are introduced to the Cornell campus and the Ithaca community. They listen to distinguished campus speakers on topics concerning their new role as a foreign student on an American campus, and they participate in the socials provided for their enjoyment.

The Student Government, the controlling body for all student organizations, sponsors several activities in the international area, in addition to coordinating the programs of other groups, both international and national. It also allocates funds to these groups. Representatives of the SG International Committee have visited living units this year to discuss the possibility of an international residence unit and to encourage the housing of foreign students in fraternities and sororities. At present, some foreign students live in the Greek letter houses. Membership for foreign students in fraternities and sororities is being promoted.

The Cornell United Religious Work provides the religious foundation for the University and promotes much interaction between foreign and American students on campus. The One World Club is composed of one-half American and one-half foreign students. The members and other interested students meet twice a month on Saturday afternoons for tea or coffee and
a lecture by some distinguished speaker on an international topic. This year's schedule includes the Ambassadors from Algeria, Argentina, Poland, to United States, the Director of the Peace Corp, Mr. Sargent Shriver, and outstanding Cornell professors.

The Student Union, commonly known as The Straight, sponsors programs of a social type in addition to housing a room called the International Lounge for socializing. One of its first weekend trips last fall was to Watkins Glen. At the park students hiked through the wooded area. Afterwards there was singing, talking, and guitar strumming by the campfire, an informality not found on the campus. The second weekend trip was to Niagara Falls. On the way, students stayed overnight with families living in Buffalo, New York. Arrangements for this had been made by the American Field Service. The students learned more about the American family and enjoyed seeing one of the world's natural wonders.

There are many national organizations at Cornell such as the Chinese Student Club, Asian Music Society, Arab Club, Thai Association, and Hungarian Students. They sponsor special programs, concerts of their homeland's music, and parties celebrating the gaining of independence of various small countries. International attendance is an assurance at these events. Asked if national groups were good for an international atmosphere, Mr. Kizilbash, who serves as a liaison between student activities and the International Student Office, said they were. Being away from home, it is stabilizing to meet and to be with others from your country.

Cornell has an international newsletter called "Internationally Speaking," which serves as a major method of communication for the foreign student. The newsletter features international events, issues, and articles written by the international staff, foreign student advisers, committee chairmen, and interested students. Last year's editor was Hassan Sabeti Rahmati, an Iranian working on his doctorate in nutrition. This year's editor is an undergraduate coed, Edith Lederer, an American majoring in journalism.

International interest is evidenced beyond the Cornell campus. Faculty wives, alumni, and citizens of Ithaca have active interest in the foreign student. Faculty wives in the Campus Club offer winter clothing to new students at a nominal cost in the beginning of the school year. The International Hospitality Committee is responsible for introducing students to the community and arranging facilities in homes for having foreign students as guests at holiday dinners. This same Campus Club formed a Host-Family pro-

gram in 1960 with 40 families offering to have foreign students in their homes at various times, being their families away from home. The program has been so well received that the number of families volunteering for this service has increased to 400. The success of this program is proof of its importance. One foreign student said to Mr. Kizilbash, "This has been my most memorable experience at Cornell."

The International Wives Friendship Club is composed of over one hundred wives of foreign students and faculty. These women help in matters concerning shopping, city restrictions, and public health service. The club also conducts English classes to help those that are having difficulty with the language. Response to all these programs has been high among the faculty wives and Ithaca alumni and citizens.

Alumni in other cities are active in the international program. This past summer, the Cornell Rochester Alumni chapter had a group of foreign students over for a day. They had a picnic lunch and showed the students local sites of interest. When the event was reported, other alumni groups in different cities became interested in sponsoring similar programs for this coming summer. Alumni groups are being formed in foreign lands. One was recently organized in India.

A problem of all international programs is the same one repeated time and again by committee chairmen, foreign student advisers, and the foreign students themselves at Cornell: "There is a lack of follow up." The one-time effort is not enough to cultivate one international friendship or a world of international understanding. International understanding begins to grow at the educational level in our higher institutions in the United States and abroad. To be included in this international world, the people of the United States can not continue to be uncommunicative, provincial, and uninterested. World peace is approached through international understanding.
COUNTRYMAN CAPSULES

James A. Perkins, vice president of the Carnegie Corporation of New York and the Carnegie Foundation for the Advancement of Teaching, was elected Cornell's seventh president, succeeding Deane W. Malott, who will become president emeritus. A graduate of Swarthmore College, Perkins received his doctorate from Princeton University, where he held various positions until 1941. His wide background includes the vice presidency of Swarthmore, and numerous government, international, private research, and educational positions. He founded the Council on Higher Education in the American Republics, and recently submitted to President Kennedy a report as chairman of the President's Advisory Panel on a "National Academy of Foreign Affairs," which was publicly endorsed by the President. His selection as Cornell president, effective July 1, was lauded by educational leaders and others throughout the nation.

* * *

The Cornell Board of Trustees has announced that effective July 1 undergraduate tuition and fees for New York State residents in the College of Agriculture will be $500 per year and in the College of Home Economics $525; non-residents of the State will pay $900 in the former and $925 in the latter. All students, resident and non-resident, engaged in graduate work in the State Colleges will pay annual tuition charges of $775. The actual increase in charges to the New York State student amounts in most cases to $150 annually. However, for the first time students in the State-supported units at Cornell will be eligible for the scholarship incentive awards provided by the State to its residents enrolled in institutions charging $200 or more annually for tuition. Any New York State student is eligible for an incentive award of $100 per year, and this will bring the net amount of the increase paid by the student to $50 a year. Many of the students will be eligible for grants of $200 per year, and this will mean that for them next year's net costs will be less than this year's.

A Change

THE FUTURE OF THE CORNELL COUNTRYMAN

To: Board of Directors, Cornell Countryman

From: The Editors and Staff of the Cornell Countryman

The Cornell Countryman presently is facing one of the most critical problems of its history. Due to many factors which are outlined below, the magazine is suffering from an inadequate staff, a weak financial base, and a chronic lack of support from the student body.

1. The most immediate problem facing the organization is the lack of an editor-in-chief for the Spring Term, 1963. This is due to the fact that the associate editor slated to take over the position of leadership left the University on an indefinite leave of absence in December. Other staff members cannot take the position because of heavy obligations, both to academic and to other organizations.

2. In addition to the lack of future leadership, the staff is critically weak in several departments. The advertising staff consists of only one person who will be graduating in June, and who presently is bound with academic obligations. The other members of the advertising department have resigned due also to academic obligations.

3. The business department, likewise, has only one member, the business manager, who will be graduating in 1964. There is no one in training to take her position.

4. The art editor and cover designer is leaving school at the end of January on a medical leave of absence.

5. There is no one trained to take over the vital staff position of managing editor. The person now filling the position will be graduating in June.

6. Despite the fact that two competent sessions were held during the fall term, both of which were heavily publicized, the magazine has only attracted three competent.

7. For the magazines published in October, November, and December, the organization has incurred an approximate deficit of $90.00.

8. Despite the strong efforts exerted, the organization is able to acquire a maximum of only two pages of local advertising. This is due to the size of the advertising staff, the disinterest of local merchants, and the contracting of approximately ten advertisers with a local agency which is directing this advertising to other publications on campus for at least the next two years.

9. The magazine's national advertising representative has acquired only four pages of advertising during the fall term. Due to heavy agency commissions, this advertising, worth $225, netted the magazine $148. The agency did not contract any advertising for either the January or February, 1963, issues.

10. Despite strong efforts on the part of the editors, the magazine was unable to obtain any financial support from the Cornell Student Executive Board, which distributed more than $61,000 to campus organizations this year. Both the Executive Board and the Finance Commission of that Board stated that the magazine did not deserve support because of its weak business organization.

The above-stated facts indicate that the Countryman is faltering badly as an organization. The facts state and imply many of the reasons that have given rise to this situation, but do not explicitly point out the major factor—lack of student interest and lack of student support. This is only a reflection of a trend in many campus organizations here and elsewhere.

Today's student is bound up in rigorous competition that was unknown a decade ago. He still has considerable free time, but prefers to spend it in organizations that are socially oriented, and which do not involve time, work, and responsibility. This statement is supported by the fact that while other campus organizations have suffered from a lack of interest, the fraternity and sorority systems have continued to thrive, perhaps with increased vigor. The Countryman is not unlike other...
campus publications, most of which are being nearly wholly supported by administration funds, and which do not publish regularly, if at all.

Perhaps, as some persons have pointed out, the magazine is lacking in strong and dynamic leadership. This may be true, but it is a false assumption to say that the lack of this so-called leadership has resulted in a lack of effort and incentive on the part of the upper staff members. It must be remembered that the magazine's officers are students also, many of them carrying heavy academic loads, and they do not have time for activities whose sole end is morale-building.

There is another approach to take in trying to find the causation of the present problem. Does the Cornell Countryman have a purpose? It is not a student publication, for nearly 2600 of the 3200 copies are sent off campus. The magazine is neither directed at the student, nor does it give complete coverage to student activities. This is understandable, for student activities in this day are hardly within the realm of a monthly publication. This is newspaper material, and should be published in the Cornell Sun. Having a magazine attempt to fill the role of a newspaper not only results in a poor and untimely publication, but, in the case of Cornell, aids the cause of campus dissunity by duplicating what is officially the University's student newspaper.

The magazine has been called a student laboratory in journalism. This does not seem a proper function for the Countryman, for it lacks formal professional leadership. The magazine seems now to have lost many attributes of a learning experience. It is more of a burden on those involved, and the pleasure that normally goes with an extracurricular activity has been lost because of the pressure that is on the staff members.

The magazine does not fill the role of an alumni journal, for the content is not explicitly directed at alumni. Furthermore, this function is already filled on the campus by the Alumni News. In a manner, the Countryman could not attempt to duplicate. Since students are involved in the preparation of the magazine, they are not in a genuine position to inform the alumni of the College's doings. Finally, the alumni have shown a significant lack of interest during the past term in even obtaining material for their page in the magazine.

The magazine is not the technical publication of the Colleges of Agriculture and Home Economics. This role is filled by extension bulletins and research reports, as well as by such magazines as Farm Research. The staff is furthermore unqualified to make an official interpretation of the College's work.

The magazine, once thought to be a student-recruiting device, does not fill that function either. This was shown last year when the staff was interested in publishing a summer issue for recruitment and orientation purposes. Understandably, we were not granted funds for this venture since we are not officials of the College and since the Admissions Office adequately covers this field.

Thus the magazine is spread thinly over a wide range of interests. This has resulted in some weak support from several groups, but no strong support from any one group, particularly from the student body, which is the source of the staff's strength under the present form of operation.

Thus it is obvious that the organization has many weaknesses, and it is the opinion of the staff that it can no longer function under the present system. Some new mode of operation must be found, and particularly some new mode of staffing the magazine. It is true that the present staff could carry the magazine on through the Spring Term, and perhaps through next year, but this is not a solution to the problem and is also grossly unfair to the staff on the part of the Directors. We realize that it is necessary to take the steps toward recovery now, or the organization may reach a state of decadence beyond revival.

With this in mind, we would like to make the following recommendations to the Board of Directors:

1. That the responsibility for the operation of the Cornell Countryman be assumed by the Department of Extension Teaching and Information, and that the Department staff the organ with students majoring in agricultural journalism. Work done by the students on the magazine could then be counted toward their student practice requirement. This would give the magazine professional formal leadership, and perhaps improve its quality, since the present officers, in the main, lack formal journalism education, while the proposed staff would be specializing in the field.

2. That the responsibility of the operation of the Cornell Countryman be assumed by the Department of Extension Teaching and Information, and be given the status of a course, carrying a certain number of credit hours, and open to all students in the Colleges of Agriculture and Home Economics, as well as the University at large. This has been tried in other campus organizations, particularly musical groups, and has worked successfully.

3. If the Department of Extension Teaching and Information does not undertake the above recommendations, it is recommended by the staff that publication of the magazine be suspended indefinitely, or the organization dissolved, with all assets reverting to the University for the benefit of the Colleges of Agriculture and Home Economics, as provided for in the magazine's Constitution.

Respectfully submitted

STAFF OF THE CORNELL COUNTRYMAN
by Paul Roman, Editor-in-Chief

Note: Recommendation Number 1 has been adopted, effective with this issue.
State College of Home Economics at Cornell

Students in this College explore the functions, growth, development, and continual change of marketing institutions. They study the emotional as well as the physical and financial resources of families. They are encouraged to search for the social and psychological, the economic and financial factors that strengthen or weaken family life; and they study the never-ending process of decision-making in the home.

Physiology, chemistry, biochemistry, physics, and biology are among the natural sciences that provide students with a practical working knowledge of the material and physical resources of life.

Economics, sociology, psychology, and anthropology are representative of the many social sciences that contribute to the students' understanding of people.

Studies in the humanities and the arts give students an appreciation for the philosophic and artistic concepts that, along with basic scientific concepts, form the foundation of home economics. Although home economics is the focus of their study, students also take classes in many other divisions of the University.

In the College this year 707 undergraduates and 124 graduate students are preparing for professional careers in home economics.

Helen G. Canoyer, Dean

No. 5 in a series from the New York State College of Home Economics, a unit of the State University, at Cornell University, Ithaca, N. Y.
Cornell's Agricultural Leaders' Forum on March 21 provides an educational platform to discuss a topic of broad state-wide interest—Rural Resources Development.

Keynote speaker, Commissioner Harold Wilm, N. Y. State Conservation Dept., outlines plans for the development and use of the state's water resources. Prof. Howard E. Conklin, economist, discusses land use and Prof. Harlan B. Brumsted, conservationist, reviews demands and opportunities for development of recreational facilities, with emphasis on fish and wildlife resources. Bruce Wilkins describes the Broome county rural development program. A panel, led by Prof. A. A. Johnson, N. Y. extension director, includes representatives from each state and federal agency concerned with rural resource development.

Cover—Designed by Mrs. Otto Schultz. Our cover this month depicts the natural resources New York State is interested in developing: land, water, forests and wildlife.
Nearly everybody that went swimming in Beebe Lake last spring saw a ten- by fifteen-foot gravel island, exposed for the first time in the narrow channel leading from upper Beebe gorge to Beebe dam. I doubt, however, that many people are aware of how it came into being.

My own first thoughts on the subject were clear enough: last year’s unusually large quantity of ice must have pushed up a ridge. Unfortunately, several things seemed wrong with my conclusion. In order for a ridge to be plowed up by the ice, there must be an ice surface capable of plowing up the stream bed; and the ice mass must be heavy and plastic enough to move forward. Yet I saw no evidence of a plowing surface on the channel sides. Moreover, ice less than 200 feet thick is not plastic, and does not flow, I learned from O. D. von Engel’s excellent book on regional geology.

The location of the gravel island in the middle of the channel indicates that it was probably formed by water action. Perhaps last spring, during an early thaw, a large volume of melt-water pushed its way over the ice, forming a channel for itself. Then, as it moved through this narrow channel, which originates upstream from the bridge over the gorge, the speeding water would have picked up large quantities of sand and gravel coming downstream. Just downstream from the bridge, where the channel deepens and becomes part of Beebe Lake, the water’s speed would decrease, and at this point the heavier gravel would fall back to the stream bed. While this cycle of erosion and deposition was occurring, the ice walls of the channel were melting, slowly creating an ever-widening space for the water. Continued widening, and lowering of the water level, would have left the original area of deposition exposed in the form of a small oval island.

This is an interesting example of modern erosion, but let’s consider some other more impressive results.

Roughly a million years ago the surface of the land between Ithaca and Syracuse was relatively flat. A divide extended “...southwestward from the southwest corner of the Adirondacks.” Streams north of the divide, passing near what is now Aurora on Cayuga Lake, flowed north, those south of the divide flowed south.

At about that time in the history of our region, the first of two great Pleistocene ice sheets began moving down over North America. The old Cayuga River valley, then carrying water north, served as a natural channel for the giant ice sheet moving down from Labrador. The plastic ice sheet, 2,500 feet thick, exerted its greatest eroding action on the floor of the old river valley, where it was thickest. As the valley became deeper, the gouging action of the ice increased. When this first glacier retreated, a great trough remained where the old valley had been.

Great eroding potential was imparted to the upland streams that cascaded down into the trough. During the ensuing thousands of years a series of gorges were cut into the uplands.

The interglacial warm period ended after a time and a second glacier moved down from the north. Again the ice sheet tended to follow the existing north-south valleys, and again the valleys were gouged out.

Like the first glacier, the second carried a great deal of eroded debris. When the second glacier melted, it deposited its load of glacial till as a thick blanket of rough, crushed, and sometimes powdered rock. This blanket buried most of the features of the interglacial topography. The interglacial gorges, for example, were buried.

During approximately 9,000 years since then, new gorges have been carved into Ithaca’s hills. The big waterfalls, so characteristic of this region, are examples of trough-rim falls that, due to erosion, have gradually retreated into the uplands.

Some of the post-glacial gorges cross the beds of old interglacial gorges. Beebe Lake lies in just such an interglacial gorge. The clean-cut areas above and below Beebe have been formed during the last 9,000 years and are still being cut and modified today. Ice, and water with its load of sand and gravel, are still the major agents of erosion. I expect that man also fits in here somehow.

I was intrigued by the forces that could cause the appearance of a new island, sitting in that icy green water. Those that saw the ice decaying in the afternoon sun can testify that it was an impressive sight. Those that have seen massive sheets of ice reach out into the air as they went over the dam at Noyes Lodge in early spring will not forget how those sheets thundered down onto the rocks, sending up sheets of spray. These are some of the things that shape the terrain.
Discover the real grow power in your soil with Soil-Tailored Agrico fertilizer

Manage your soil to unlock its real grow power by using a fertilizer formulated locally to fit local soil needs. This is important because the action of fertilizer elements in your soil is influenced by soil structure, pH, temperature, drainage and organic matter content. By formulating locally, Agrico agronomists are able to select plant food sources which best fit your local soil conditions and crop needs.

For example, Agrico makes over 42 different 5-10-10 Agrico fertilizers. Each is Soil-Tailored, formulated locally to meet local crop and soil needs. That's why in 179 on-the-farm comparisons with other fertilizers, corn averaged 6 extra bushels per acre, made $7.03 extra profit over fertilizer costs, with Agrico fertilizers.

Ask your nearby dealer for Soil-Tailored Agrico—the Nation's Leading Fertilizer.

AGRICO
THE AMERICAN AGRICULTURAL CHEMICAL COMPANY
SIGNS OF PROGRESS IN RURAL DEVELOPMENT

by Bruce Wilkins, Associate County Agricultural Agent, Broome County

Several years ago Extension’s Rural Policy Committee found after extensive research that 63% of the land in Broome County could not support full-time commercial farming. Three quarters of the owners held less than 100 acres and half of them had held the land less than five years. The land was being sold to families unaware that it could not support them. They found this out, but lost their savings doing it. They moved away, and the place was sold again.

Today these parcels of land are being purchased for purposes other than commercial farming. They are being purchased to satisfy family living needs such as privacy and a place for the children to play. And, the buyers recognize the limited possibilities of supplementing family income. A strong basic urge to do something with the land is being satisfied by developing recreational facilities, encouraging wildlife, and reforesting open acres rather than clearing brush, plowing fields, and planting crops.

Landowners, working with the Rural Development Program, have greatly enhanced the value of their abandoned farms. For example, one county resident recently sold a parcel for $45,000 which he purchased for $2,500 about eight years before. Another man was transferred so he sold his “farm home” for $20,000. He had purchased it, plus 100 acres of land, for $15,000 a decade before.

These families had fully satisfied their objectives in purchasing the land by limiting expenses to modernizing their home, developing recreational and fishing facilities, reforestation, and Christmas tree production. Expenses were capitalized, were marketable, and, therefore, returnable to the family.

These were among the 1,000 rural non-farm residents that participate yearly in this intensive educational activity called the Rural Development Program. We are using conventional extension methods familiar to all of you and we involve rural non-farmers in developing the program.

After nearly eight years of this program, what are some tangible results? The rural population is growing and our 1959 survey showed that ownership of properties has stabilized. Now three of every four five or more years on the property compared with only one out of two in 1948.

The properties cited earlier indicate the larger tax base which has resulted through improved land utilization.

Now only 2% of the county’s commercial farms gross less than $2,500 a year, and few of those rural residents with a job in town do any farming. The part-time farmer, competing with commercial farmers, has become commercial, or chosen a different way of utilizing his land.

Churches closed in the 1930’s have reopened, and have growing congregations, indicative of the resurgence and strengthening of community services seen and felt in our rural areas.

The Broome County Soil Conservation District now has more than 100 requests for pond construction but can build only 25 per year.

These are signs of progress, but we also have problems. We have had the continuing problem of contacting these families quickly when they first purchased the property. Modernization of the home is their first desire. So, we, and the home demonstration department, are planning activities on home remodeling.

Certainly one major problem is a vast gap in information between what appears practical and what we can substantiate with research. For example, we still don’t know how best to manage large bodies of water, the requirements for successful recreation areas and shooting preserves, or the economics of Christmas tree growing.

Though these problems and others exist, the Agricultural Executive Committee and leaders in the county are enthusiastic over the Rural Development Program’s success. Desirable uses of the land are common, land values have risen, community services have strengthened, and perhaps most important are the happier and more satisfied rural families.
REBIRTH OF A SPORT

by
Michael S. Friedman '64

It was still 20 minutes before game time and Lynah hockey rink was packed to the rafters; 4,500 persons occupied every available space in the building. The campus police had to close the doors and refuse admittance to more than 1,500 fans who waited outside in the bitter cold. One man got inside just before the cut-off point. However, his wife who was a couple of steps behind him was denied entrance. Turning to his wife, the man said that he would see her at home after the game. He was not going to miss this contest.

The night was December 7, 1962, and this was not just an ordinary contest: Cornell was meeting St. Lawrence on the home court. The spectators were treated to one of the finest performances by a Big Red team in the history of Cornell athletics.

With the crowd cheering every Cornell move, the Big Red sextet pulled off one of the biggest upsets of the Eastern hockey season as it defeated the Larries, 5-4. Just the year before, St. Lawrence had been the champions of Eastern hockey.

The victory was only one of several notable accomplishments that Cornell's fastest growing sport has achieved during the last year. Hockey has developed into one of the most popular sports on Cornell's athletic scene. Almost every home game is now watched by a capacity crowd.

It has not always been like this for Cornell hockey. In fact hockey here has had a trying and generally unspectacular history since 1900. Through the years inclement weather and poor ice conditions on Beebe Lake disrupted practice and forced the cancellation of innumerable games.

After the 1947-48 season, the administration decided to drop the sport until indoor facilities became available. For the next few years it seemed that it might be a long time before hockey returned to Cornell. Then, in 1956, the sport received its biggest lift. The University received $500,000 from an anonymous donor to build an indoor rink in memory of former Athletic Director James Lynah.

Cornell looked around for a capable coach, and in 1956 hired Paul Patten. Patten had been head coach of hockey at St. Lawrence from 1946 through 1950, and was head football coach from 1948 through 1955 at the same school.

The completion of Lynah Hall enabled the sport to be resumed in March of 1957. The new indoor skating rink had an ice surface of 200 by 85 feet and a seating capacity of 4,200. The first game at Lynah was on March 21 of that year when a capacity crowd watched the New York Rangers defeat the Rochester Americans, 7-3 in an exhibition contest.

The 1957-58 season marked the return for hockey at Cornell after a ten-year absence. In its first game on December 16, 1957, the Big Red defeated the Lehigh Hockey Club, 16-3, before approximately 1,500 spectators. Patten had a squad of 20 players the first year. Everyone who came out for the squad played, although many had never played before entering Cornell. Performing mostly against club teams in its inaugural season, Cornell compiled a 3-7-1 record.

The next season the administration decided to enter into the
midst of the Ivy League. The losses in 1958-59 were even more severe than the year before. Cornell was 4-16-1 for the season and 0-10 in league play. The Big Red scored nine goals and gave up 101 in its 10 Ivy losses.

But the 1959-60 campaign was the turning point. It was not reflected in the varsity’s play that year, however, because Cornell won only two of 21 games and once again lost all 10 Ivy contests. But Patten was starting to interest many fine Canadian athletes in Cornell, and as a result the freshman teams were showing vast improvement.

The ’59-60 frosh team won all 11 of its games. At the end of the season it played the varsity a game that ended in a 4-4 tie.

During its regular season, the frosh team scored 80 goals while the opposition registered only 15. Goalie Laing Kennedy was sensational in the nets. He averaged 1.4 goals for the 11 game season. During the season, freshman coach Morgan Hatch remarked: “Kennedy, the goalie, is really good. The Ivy League will get to know his name well before his four years are up.” In the ensuing years, Kennedy proved how true these words really were.

Other players from the frosh team who were to make their presence felt in varsity play were Steve Kijanka, Rudy Mateka, Harvey Edson, Webb Nichols, Jim Fullerton and Bob Myers.

The addition of several players from the ’59-60 frosh team was reflected in the varsity’s play the following season. After 26 consecutive Ivy losses, Cornell defeated Brown, 6-2 at Ithaca for its first league win. Cornell finished with a 7-12 overall record and a 2-7 league mark.

For the first time, Cornell escaped the league cellar. It was losing games by narrower scores. It lost its 12 games by an average margin of less than 2.5 goals. The highest total that Cornell allowed was in its 6-1 defeat by Princeton. Harvard, the league champion, just barely got by Cornell as it won by 3-1 and 2-1 scores.

For the second straight year, Cornell came up with a good freshman team. The ’60-61 cubs won seven and lost three. It was Jerry Kostandoff, Jim Stevens, Charlie Luther, Bill Oliver, Steve Poole and George Walker who led the attack.

Last year was the season that Cornell “arrived” in Eastern hockey circles. It finished the season with an outstanding 13-5 record, but more important, the team was runnerup to Harvard in the Ivy League with a 7-3 mark. For the first time in 50 years the Big Red defeated Harvard, Princeton, and Yale.

Undoubtedly, the highlight of the season was the 2-1 victory over Harvard before a capacity crowd at Ithaca. The victory meant the most for Captain Marty Torney and Jim “Torch” Lytle, the only seniors on the team. Just two years before, they had played on a Cornell team that was humiliated by the Crimson 18-0.

Kennedy was honored at the end of the season by being named the All-Ivy goalie. Kostandoff, the team’s leading scorer, was selected to the second league team. The squad was recognized as one of the top eight teams in the East by the Eastern Collegiate Athletic Coaches, and Cornell was chosen to play in this year’s ECAC holiday hockey tournament at Madison Square Garden.

Patten feels that hockey at Cornell “has reached a plateau of respectability.” He thinks that the University is one step away from ranking with the best teams in the East. The last and final step is the most difficult one: to interest the best high school players in selecting Cornell, if they can pass the admission requirements.

Although Patten is leaving at the end of this season for business reasons, he will continue to handle some of the recruiting for Cornell hockey. He is confident that Cornell will soon complete the final step of development. If Cornell can continue to progress as it has since hockey returned in 1957, there is no reason why Patten should not see this accomplishment in the near future.

11 Out of 21 Varsity Hockey Players Are in the College of Agriculture

*1 Kennedy, Laing (Capt.) G Sr Oxford Centre, Ont.
2 Adams, Dick C So Buffalo, N.Y.
3 Myers, Bob W Sr New Haven, Conn.
4 Nichols, Webb D Sr Farmington, Conn.
5 Kostandoff, Jerry W Jr Thoird, Ont.
6 Delius, Ken W So Denville, N.J.
7 Poole, Steve C Jr Canton, N.Y.
8 Davis, Lyle C Jr Concord, Mass.
9 Edison, Harvey W Sr Duluth, Minn.
10 Teryazos, Terry W So Montreal, Que.
11 Stevens, Jim W Jr St. Marys, Ont.
12 Mateka, Rudy D Sr Welland, Ont.
15 Oliver, Bill D Jr St. Catherine, Ont.
17 Steere, Tony D So Hanlen, Conn.
18 Walker, George D Jr Niagara Falls, Ont.
19 Kijanka, Steve C Sr Sarnia, Ont.
20 Witherell, Charles D Jr Lake Placid, N.Y.
21 Edgar, Charles W Sr Chagrin Falls, O.
22 Howard, Cabanne G Jr Tarrytown, N.Y.
24 Koons, Charles D So Noroton, Conn.

*Students in the College of Agriculture.
PROMOTING USE OF LAND FOR NONFARM PURPOSES

by Professor H. E. Conklin
Department of Agricultural Economics

New York State has a modern, dynamic agriculture. Today one-fourth as many farmers are producing one-third more products on one-half as much land as in 1900.

As a result of these dramatic changes, several million acres in New York that have become obsolete for farming, but have not yet been turned to other uses well enough to make them a very substantial part of the tax base. This land is intermingled with farms in the tax districts of the state. Farmers always have reason to be concerned with the local tax base, so have reason to be interested in the development of the lands that have passed out of farming.

Private personal recreation occupies more of the retired farm lands in New York today than any other nonfarm use. This has been overlooked in many of the recent publications and discussions.

Part of the reason for the rapid rise in ownership of retired farm lands came from the fact that in New York we have created the machinery for supplying increasing quantities and kinds of public services to rural area. Today, there seems to be no point in thinking of zoning or other devices for keeping people out of rural areas. Roads, electricity, school buses, and other services are available. Increasing numbers of rural people, if encouraged to develop their properties, likely would not increase public costs in full proportion to the increases they would bring in the tax base.

Private personal recreation surely will be the use into which a majority of the lands will move that are retired from farming in the years immediately ahead. This use includes such enjoyable experiences associated with living in the country or with having a summer home, a hunting cabin, or just a place to pitch a tent on one’s own land. Between 65 and 80 percent of the 200,000 or more acres that are retired annually will likely move into this use.

Instances in which individuals are developing retired farm land for commercial recreation are growing rapidly, but are not yet plentiful. A study was made last year of a private commercial campground near Ithaca. It is a part-time effort for the family that operates it and has been highly successful. Another similar effort in Chenango County has been studied. All of us know of successful ski developments, commercial hunting areas, the development and sale of lots on artificial lakes, rural golf courses, commercial riding stables, summer guest farms, and similar undertakings. As yet commercial recreation occupies a rather nominal acreage, as well as a nominal amount of rural employment.

Private commercial recreation can absorb 10 to 15 percent of the land released from farming in the years ahead. It can also go back and pick up some land previously retired.

Provision for public recreation by state and local governments is now moving ahead, and it can reasonably absorb 5 to 10 percent of the newly released farm land.

Transfer of farm lands to suburbs, roads, airports, and rural industrial sites should be done largely from an urban point of view. These uses can, of course, pull good farm land out of agriculture, but the potential value of the lands to the new uses should be the primary consideration. Farmers should be well paid for the land they give up and planning processes should provide for keeping farmers informed of the anticipated timetable of transfer.

There is no need for forcing roads onto side hills or subdivisions into swamps to save farm land. At the same time, there is no advantage from anybody’s point of view in wantonly chopping up farm land with shoestring developments, scattered subdivisions, and speculative holdings.

About 2,000,000 acres of the State is presently occupied by urban and urban-connected uses. Approximately 5 percent of the newly retired farm lands may go into these uses, plus an additional acreage of good land.

For now and the future it would be worthwhile to stimulate the people of New York, and especially farm people, to more thorough consideration of such possible actions as the following:

(a) Initiation of an expanded educational program, supplemented with tangible aids, to help people enjoy owning retired farm land.

(b) Provision of information, advice, and tangible aids to promote successful private commercial development of retired farm land.

(c) Provision of education and aids to strengthen the forest products industry of the state, particularly at the level of the small logger and sawmill operator.

(d) Public purchase and development of lands uniquely suited to public recreation, but without duplicating development that can be carried out by private persons.

(e) Substantial and rapid improvement of all public programs to increase the occupational opportunities open to rural people.

(f) Stimulation of thought and action by local groups to the end that they may consciously and with perspective anticipate, plan for, and guide development of the rural resources in their particular local circumstances.
Variety: the spice of life at American Oil
by Jim Koller

“When I was first interviewed by American Oil representatives I was told I’d be given a free hand in guiding a wide variety of projects. This promise has certainly been kept!”

Jim Koller, 25 years old, came to American Oil right out of the University of Wisconsin where he earned his Bachelor of Science degree in Chemical Engineering. An Evans Scholar at Wisconsin, Jim describes his job at American Oil this way: “I work on basic chemical engineering problems, specializing in reactor design and process development problems. Before a process can go commercial, it must be tested in pilot plants. That’s where I come in.” Jim wants to stay in the technical research area, and plans to enroll in the Illinois Institute of Technology night school for courses in advanced mathematics.

The fact that many gifted and earnest young men like Jim Koller are finding challenging careers at American Oil could have special meaning for you. American Oil offers a wide range of new research opportunities for: Chemists—analytical, electrochemical, inorganic, physical, polymer, organic, and agricultural; Engineers—chemical, mechanical, metallurgical, and plastics; Masters in Business Administration with an engineering (preferably chemical) or science background; Mathematicians; Physicists.

For complete information about interesting careers in the Research and Development Department, write: D. G. Schroeter, American Oil Company, P.O. Box 431, Whiting, Indiana.

IN ADDITION TO FAR-REACHING PROGRAMS INVOLVING FUELS, LUBRICANTS AND PETROCHEMICALS, AMERICAN OIL AND ITS AFFILIATE, AMOCO CHEMICALS, ARE ENGAGED IN SUCH DIVERSIFIED RESEARCH AND DEVELOPMENT PROJECTS AS:

New and unusual polymers and plastics • Organic ions under electron impact • Radiation-induced reactions • Physicochemical nature of catalysts • Fuel cells • Novel separations by gas chromatography • Application of computers to complex technical problems • Synthesis and potential applications for aromatic acids • Combustion phenomena • Solid propellants for use with missiles • Design and economics: new uses for present products, new products, new processes • Corrosion mechanisms • Development of new types of surface coatings.
SOMETHING FISHY HERE

by Lee Carl,
Extension Information Specialist

The birth of Siamese twins usually causes considerable excitement. But when six pair were born at Cornell recently, their appearance was taken calmly, although with interest.

The joined twins were fish that swam briefly, then died. They were among curious happenings and discoveries in the ichthyology laboratories of the Conservation Department at the College of Agriculture.

Weeks before, death came to 50 “crazy-mixed-up” fish of another type, which now rest in a jar of formaldehyde. If a fisherman were asked the species, he might gaze in bewilderment—first saying chub (or horned dace), then changing his mind to common shiner. He would be partly right in both cases, for the fish were born of an artificial cross—the first ever accomplished with these species.

These hybrid fish grew from eggs fertilized in a laboratory aquarium, and were preserved only after showing signs of failing 14 months later.

“The amazing thing,” according to Prof. Edward C. Raney, Cornell ichthyologist, “is that they lived so long. In natural waters they might have lived a full life. This could mean the two species are more closely related than we think.”

Although the males of this cross carried on no courtship with the females, they at least lived fuller lives than the Siamese twins who died only days after they were hatched. Weeks before the hatching, microscopes had revealed the doubled, joined embryos in about five percent of the eggs of a South American fish. The cause: unknown.

The parent fish were donated to the ichthyology section by an animal husbandry student, James D. Archer of Barancahmeja, Colombia, who caught the fish in Colombia’s Magdalena River. Although called Rachovia, the species is yet to be positively identified.

The eggs, laid in sand in an aquarium tank, were sifted out and examined. Archer and Neal R. Foster, graduate assistant in ichthyology, discovered the Siamese-twin formations as the embryos began to develop. Each pair was joined at the yolk sac.

Raney points out that Siamese twins are rare in the fish world. When born, they generally do not live long because of feeding problems and lack of cooperation.

The twins, along with the chub-shiners, are now members of one of the largest research collections of fresh-water fish in the world. The Cornell collection, worth more than a million dollars, is one of the most valuable collections of anything at the University, says Raney. Started at the founding of the College, it now includes about a million specimens stored in alcohol.

“It is vitally important,” Raney points out, “because it contains many ‘types.’ A type is a specimen serving as a basis for naming a species. In other words, a fish of a particular species is identified through the type and its filed description.

“If there’s any doubt about a fish,” explains the scientist, “we can go back to the type-species and make comparisons. A type is something that cannot be replaced.”

Although the collection is particularly rich in eastern North America and New York State fresh-water fishes, Raney reports the addition of about 31,000 specimens of shore and pelagic (ocean-type) fishes from the Bay of Guinea, Africa. Also in recent years, large number of North American marine shore fishes have been added.

Altogether, more than 43,000 series (collections of fish—each usually one jar containing one species gathered at a certain location and time) have been catalogued, and about 500 others need to be sorted and catalogued.

With much of the world turning its eyes to the seas, lakes, and rivers for future food, the importance of ichthyology is growing yearly. The Cornell collection has contributed entirely or substantially to more than 400 research papers on systematic ichthyology, including theses and dissertations, during the past 25 years.

The National Science Foundation recently granted $22,000 in support of the collection, to be used over a three-year period for the hiring of graduate students as curators and researchers. It also will be used to further studies in evolution, anatomy, and fish relationships, for equipment and housing facilities, advanced studies and preparation of research papers, field studies, and the hunting, collecting, and adding of new species.
A MILLION DOLLAR COLLECTION—Dr. Raney selects a jar from among the million specimens of preserved fish in the Cornell collection, which was started at the founding of the College. Today, it is one of the most valuable collections of anything at Cornell, worth more than a million dollars. It includes one of the largest research gatherings of fresh-water fish in the world.

Similar support in months past has made it possible for graduate students to investigate American streams and coastal waters. Recently, four young researchers rediscovered a fish thought to be extinct. Known as the Maryland darter (Etheostoma sellare), it was found in a small Maryland stream—Swan Creek, which empties into a marsh along Chesapeake Bay near the mouth of the Susquehanna River.

Two specimens of this fish were discovered in the same creek 50 years ago. They were the first and last to be found until now, despite efforts of many scientists.

The four Cornell graduate students—Foster, Leslie W. Knapp, William J. Richards, and Robert V. Miller—found an inch-long specimen.

"The strange thing about this fish," reports Raney, "is that it was found in Maryland, yet is related to no other species east of the Appalachian Mountains."

Its closest relatives may be in the Midwest, according to Raney, but even its relationship with fishes there is obscure. The examination of hundreds of Midwest species has shown nothing but a possible far-removed relationship.

"This fish is truly a relic," says Raney. "There is no fish in the East that it could have developed from, and any connection with Midwest species stems from long, long ago. Somehow it got over the mountains, ages ago."

But a fish need not be rare to get close scrutiny from Raney and his researchers, who recently launched an extensive study of the behavior and reproductive habits of killifishes and their relatives. Unlike the Maryland darter, these small fishes (properly known as oviparous cyprinodonts) are common to American streams and coastal areas, and are well known to fishermen. Many have unusual courting behaviors, prompting this effort to trace the evolution of their unique patterns.

Some species build nests and have complicated courtships, while others engage in primitive courtships and scatter eggs in aquatic plants. Some lay one egg at a time; others lay many eggs along the shore at high tide only. Low frequency mating calls have been recorded in some species.

Raney reports no adequate fossil record of these fishes, and the behavior of only a few of the 300 species scattered in temperate and tropical waters throughout the world has been studied. This project, financed through a $22,800 National Science Foundation grant, will primarily concern American types.

The ichthyologist explains that despite the close relationship of many killifishes, there is a diversity in behaviors. "We want to know how these behavior patterns developed," he says.

A major hope of the two-year project is that some of these species will prove to be good, standard aquarium fish for experimental use. Their frequent reproduction (some females spawn every day) makes them a prime subject for observation and behavior analysis. "Because of their short reproductive cycles, more data can be collected in a given period with these fishes," says Raney, "than would be possible with most other types."

Much of the research is being conducted by his graduate assistant, Foster.

Some 50 tanks are occupied by killifishes. Many are being gathered locally; others are arriving in plastic water-filled bags from many parts of the country. Some are from fresh-water streams; others from salt-water coastal areas. More than 100 tanks are expected to be used eventually. Many species also will be studied in their natural habitat.

Thousands of minute worms and water insects are being gathered for feeding. Temperature control equipment, instruments for disease diagnosis, special tape recorders to pick up low-frequency sounds, movie equipment, and other devices are being used.

Most of this equipment is in a newly renovated aquarium-filled laboratory room, still being fitted with the latest devices for probing even deeper into the mysteries of the fish world.
A scholarship for everyone enrolled in the New York State Colleges at Cornell seems an impossibility, yet most of the more than 3,000 students in the Colleges of Agriculture, Home Economics, Industrial and Labor Relations, and Veterinary Medicine will receive a scholarship from the State.

With the establishment of a $400 tuition for undergraduate students in the state colleges, as announced by the Cornell University Board of Trustees, each student from New York State will now be eligible for either a $200 or a $100 Scholar Incentive Award.

Despite this and other aid, many state college students apply for financial help because of sizeable room and board and other costs. Thus, scholarships, loans, and jobs figure prominently in many students’ attempts to balance their budgets.

COLLEGE OF AGRICULTURE

The College of Agriculture awarded 149 scholarships totalling $49,555 to its students during 1961-62. Thus far during 1962-63, the College has awarded $56,191 in scholarship aid.

Many of these awards have been established by former students or faculty members of the College, usually to promote study in a specialized area.

Prof. John P. Hertel, secretary of the College of Agriculture, points out however, that many of the above-mentioned scholarships are limited to students residing in particular counties within the State. This is also true of assistance provided by state groups, such as the New York State Farmers, the Lime Association, and the Canners and Freezers Association, Inc. A few national scholarships, such as those provided by General Foods, are open only to students specializing in certain fields.

At present, two exchange scholarships are available to male students enrolled in the College. Under the Cornell-Argentina Exchange Scholarship, a freshman is chosen each May to spend a year at the University of Buenos Aires, with most of his expenses paid by the sponsors in Argentina. In exchange, a student from Argentina receives a one year scholarship to the College of Agriculture.

A similar program has been established between Cornell and the Royal Agricultural College in Uppsala, Sweden. Under this program, a sophomore is chosen to spend his third college year abroad.

Scholarships available to students enrolled in the College of Agriculture are awarded in July and go into effect the following year. Mr. Hertel requests that scholarship applications be picked up during April and May and be returned to his office by June 1.
COLLEGE OF HOME ECONOMICS

The College of Home Economics awarded 39 scholarships and educational grants totalling $10,880 in 1962-63.

Many of these awards have been set up by the New York State Federation of Home Bureaus in honor of women active in developing and promoting home economics through the Cooperative Extension Service in the State. The Home Bureau Funds were established as a result of dime contributions from members of Bureaus throughout the counties of upstate New York and Long Island.

Other scholarships are supported by county extension groups or national companies and organizations. The Sears-Roebuck Foundation scholarships, for example, are available only to students coming from rural communities who plan to study agriculture or home economics.

Graduates of the College of Home Economics have established two alumnae association scholarships. One is given in honor of Martha Van Rensselaer, the first director of home economics at Cornell. The fund was doubled in 1962 through a bequest of Miss Flora Rose, who was co-director of the College with Miss Van Rensselaer, and later director. The Elizabeth Lee Vincent Scholarship was set up in 1953 in honor of Miss Vincent’s retirement as Dean of the College.

Scholarships and grants available to sophomores, juniors, and seniors are usually awarded by the College in May and go into effect the following academic year. Miss Esther H. Stocks, secretary of the College and chairman of the Faculty Committee on Undergraduate Awards, says that applications for these must be made by April 15, on forms that may be obtained at the Office of the Secretary of the College.

In addition to assistance within the colleges themselves, students are helped by University scholarships and grants through the Office of Financial Aids. During 1961-62, 355 students studying home economics received such aid, totalling $112,083. One hundred and one students in the College of Agriculture received $102,673 in aid from the University; 601 agriculture students received $272,402 in scholarship assistance from sources other than the University.

In a few instances college students themselves have been responsible for setting up scholarships so that more students will be able to gain a higher education. The Home Economics Club, the Dairy Science Association, the Pomology Club, and the Poultry Club all offer scholarships each year. Club members earn money for the scholarships through various projects during the year.

Because the cost of a college education has risen considerably in the past ten years, the awarding of scholarships today is based primarily on financial need. Token scholarships are awarded to students who deserve such an award academically, however.

The State University of New York, in establishing tuition for its students is following a distinct trend in education: those who can afford to pay the cost of higher education are being asked to do so, in order that there will be increased funds to aid students in financial need.

ACROSS THE NATION

Four years ago one student out of five attending college in the United States was receiving scholarship aid. And present trends indicate an increasing number of scholarships available each year. Of course, this trend may be offset by the increasing number of students going to college.

The New Republic points out that “money for scholarships is hard to come by except in rich private colleges” because many of the alumni or others interested in helping to develop the college would rather give money to construct new buildings.

It is not true that, as many people believe, vast amounts of scholarship funds go begging each year. According to Fred M. Hechinger, New York Times Education Editor, the few scholarships not distributed have too many strings attached [e.g., the student must come from Tompkins County, have the last name of Leavenworth, and plan to study chemical microbiology]. If grants such as these are not awarded, in many cases they are just added to the college’s general scholarship fund.

As Hechinger sees it, the scholarship situation still has some problems to be ironed out:

“While the colleges have tried to increase scholarship aid to keep up with the rise in tuition, costs keep out-running the aid dollars needed to keep the door of higher education open to all who might benefit, regardless of their parents’ bank accounts. Present scholarship money is far from sufficient to meet the justifiable demand.”

POSTERS! POSTERS!
Gay, Colorful, Exciting . . .
Exotic travel posters that
Capture all the flavor of distant
lands and cities . . .
Artist Exhibition posters . . .

Historical and Educational Posters

---

Cornell Campus Store
Barnes Hall
State College of Home Economics at Cornell

invites you to participate in the

Third Annual Institute for Community Leaders

FAMILY HOUSING: CRITICAL NEEDS AND ISSUES

Alice Statler Auditorium, April 30, 9:30 a.m. - 3:30 p.m.

Three nationally prominent speakers will discuss family housing with emphasis on community planning, issues related to housing for the aging, and citizens' actions at the community level.

The speakers will be: Prof. Glen H. Beyer of the department of housing and design at the College and director of the Cornell Center for Housing and Environmental Studies; Miss Flora Y. Hatcher, assistant to the administration, U. S. Housing and Home Finance Agency, Washington, D. C.; and Prof. Coleman Woodbury, chairman of the department of urban and regional planning at the University of Wisconsin.

The institute is one of many ways the College of Home Economics serves the citizens of the State. It brings before the public vital issues affecting families. The speakers present research findings, some so new they are not generally available. The event also provides an opportunity to exchange ideas and to increase understanding between community leaders and authorities in the various fields.

Helen G. Canoyer, Dean

No. 6 in a series from the New York State College of Home Economics, a unit of the State University, at Cornell University, Ithaca, N. Y.
Prof. John G. Matthyse, entomology, joined a team of agricultural experts in the development of livestock in Uganda. He is one of five Americans named to make a four-month study of methods of using that country's large tracts of fertile soil. The tsetse fly is the greatest stumbling block to development of a prime cattle industry in Uganda, and Matthyse will investigate ways of controlling it. The study is under the auspices of the U. S. Agency for International Development.

* * *

Miss Gwen J. Bymers, associate professor in Home Economics, was named to the faculty of the 86th Salzburg Seminar on American Studies, June 9 to July 26 in Salzburg, Austria. She will discuss the role of the individual investor in the American economy.

* * *

It was reported last month that grape harvesting is on the verge of being mechanized. A machine developed at Cornell, through five years of research, and later turned over to a Niagara Falls firm for the construction of a commercial prototype machine, is at the point of final remodeling and revising. Prof. E. Stanley Shepardson, agricultural engineering, reports the machine should bring some financial savings to the farmer, and substantial savings to the processor.

* * *

Prof. Frank Kosikowski, dairy science, accepted an invitation of the United Nations to assist the administrative staff of its Food and Agricultural Organization in Rome, Italy. He left last month for a six-month stay in Europe. He will help guide the work of FAO's dairy branch, will help form long-term policies for expanding dairy training and education in Asia, Africa, and Latin America, and will aid in preparing an international meeting on dairy education to be held in Paris this year.

* * *

Prof. James R. Stouffer, animal husbandry, sailed aboard the Queen Elizabeth for Europe where he will conduct research in England and teach in West Germany. On leave for six months, Stouffer will instruct in the animal husbandry dept. at the University of Gottingen, after a five-week stay in London, where he will conduct research with a commercial meat-packing firm. He also plans to visit agricultural experiment stations and research laboratories in Germany.

* * *

A study of the attrition rates in the class of 1962 was reported last month. The combined staying power in the seven undergraduate divisions of the University was listed as 72 percent. Figures ranged from 90 percent in home economics to 66 percent in engineering. The figure for agriculture: 69 percent.

* * *

Prof. Joe P. Bail was named chairman of the agricultural education division of the rural education dept. He succeeds Prof. C. W. Hill, who was chairman since 1955. Bail's work will include pre-service and in-service training of teachers of agriculture.

* * *

The Cornell Glee Club will return to England this summer to perform before musicians, students, and the English public.

* * *

The University announced the establishment of a Russian literature department, under the chairmanship of Prof. George Gibian. It will be part of the College of Arts and Sciences starting in September.

* * *

The University will train more than 200 Peace Corps volunteers this summer for service in Latin America and possibly Africa. It will offer two 10-week programs.

* * *

The Paul R. Guilden Memorial Endowment supports a contest each semester which encourages undergraduate students in New York State Colleges of Agriculture and Home Economics to write outstanding articles for the Cornell Countryman. Its purpose is to discover and reward the authors of the best articles of the semester. Chosen for recognition during the fall semester, 1962-63, were the following:


Honorable Mention category
2. Paul Roman: "Experiment Station's Role in Research"—January 1963 issue.
RECREATION AS A FARM BUSINESS?

By Prof. Harlan Brumsted
Conservation Department

What are the possibilities of recreation as a family farm enterprise?

The question really has the town talking! Since last fall, when the U. S. Department of Agriculture released a booklet on the subject, this has indeed been a popular topic of conversation wherever farmers gather. Reactions range from "nonsense" or "politics" to opinions of plausibility. Some we know are doing more thinking than talking, asking questions and planning enterprise changes.

Looking first at recreation demand brings us smack before a major phenomenon of life in post-war United States—the tremendous boom in popularity of outdoor recreation. We know its dimensions with precision, for the Outdoor Recreation Resources Review Commission has just published the first comprehensive nationwide study of outdoor leisure activity.

The picture of demand is large, far-reaching, important. Ninety percent of all citizens over age twelve participate in at least one form of outdoor recreation. One-fifth of all available leisure time is directed to outdoor pursuits. The bill-of-fare is extremely varied. Simple pleasures—walking or driving—are sought most, but the array represents every conceivable requirement for skill, equipment, time and money. Sociologists see this "binge" contributing positively to our development as individuals and citizens. Economically, outdoor recreation spending adds up to billions—a major market for goods and services.

The future? All signs point to expanding demands. Growing population is the basic reason. In 2000, when population is projected to be double 1960's, outdoor recreation demand is predicted to be up three-fold. Still higher levels of income, leisure and education are interpreted to mean more individual activity.

But this picture of the future will be strongly shaped by the quantity and quality of recreation-supporting resources and how they are managed. Take camping. With the same opportunities in 1976 as in 1960, participation is forecast to climb 89 percent. Enlarge opportunity, and experts reckon a gain of 149 percent!

The Northeast presents a paradox, or so it seems. We have 25 percent of the people; only 4 percent of the Nation's recreation land. A few shortages in facilities already are conspicuous. At the same time, in New York alone, there are 10 million acres that have become obsolete for agriculture. More is on its way to retirement. Surely this spells opportunity!

We believe it does, but, in a diverse, pervasive way, not in terms of a shooting preserve on every crossroad.

Tomorrow's pattern already seems clear-cut. Land-use-wide, a high proportion of our obsolete farmland will be rural residences (with king-sized back yards) and private weekend or summer places where recreation is the objective. These developments are now familiar scenes in the Northeast. They are characterized by higher real property values, wide application of conservation practices and the availability of many forms of recreation to circles of families and friends.

Nor is much really new about our commercial recreation developments. We have a host of types, many well established for decades. The coming years will witness more of most all forms, and some of these new businesses will employ human and natural resources that have served agriculture. Their success? Well, on this score we envision recreation enterprises as having much in common with commercial farms; success will smile on the very best combinations of management, location and natural resources.

Perhaps a wider opportunity confronting rural communities stems from the fact that the lion's share of the billions spent by recreationists goes for travel, meals and lodgings, and equipment. Two-thirds of these expenditures are made en route to, or at the recreation site. Here is growing demand for goods and services that rural communities can provide, pointing to new business and new jobs.

While no cure for all that may ail a community, recreation will provide a tonic for some. Here and there, benefits will come without trying but, for most, they will follow only after concerted study, planning, cooperation and coordination. There is "new gold" in our hills, but we hardly have begun to dig!
In last month’s issue we presented an article concerning the increase in enrollment resulting from the role the Alumni Association has played in helping to interest students in the College. As a sequel, we thought that Alumni would be interested in knowing how the trend in recent years compares with the enrollment picture since the beginning of agricultural instruction at Cornell.

In 1868, the first year of instruction at Cornell, only a portion of the Arts quad existed. The upper campus had not been visualized and a mere thirty students were engaged in agricultural studies. A prominent historian of Cornell pointed out, however, that a large share of these varsity boys knew nothing of agriculture, but had romantic notions of what could be accomplished in farming.

The history of the growth of a handful of students into the large community of people studying agriculture here today is a story with many interesting facets. During the early years the school was slow to attract students. In fact, it actually lost ground for a time, the enrollment dwindling steadily to a low of seven in 1873. In the summer of that year, the trustees authorized a $200 expenditure for promotion of the University’s agricultural work in the leading farm papers of the State. In 1874, Professor I. P. Roberts proposed, and the trustees approved, the abolition of tuition charges for agricultural students.

Free tuition and an improved relationship with farm groups served as the needed stimulus, and by 1877, enrollment had increased to 42. With only one significant decrease, the undergraduate enrollment climbed gradually to 98 in 1900.

In an effort to attract more students, some new programs were developed during this period before the turn of the century. A program for special agricultural students was started in 1874, and the first graduate student in agriculture was admitted in 1877. One of the most interesting innovations was the group of twelve-week winter courses, given annually beginning in 1893. They performed the function later taken on by the vocational agriculture departments of high schools and the two-year technical schools. Non-college people were instructed in practical aspects of agriculture. These extension courses were supported by state funds and were open to residents with only an elementary education.

In 1901, the number of students in the College of Agriculture once again started to rise. Increasing enrollment was not peculiar to Cornell during this period, but was enjoyed by agricultural colleges throughout the nation. During the latter part of the decade, the increase became so rapid that recently constructed buildings were badly overcrowded. In several instances, measures were taken to restrict the size of classes to manageable numbers. Prof. Whetzel limited admission to his class on the basis of academic average. Prof. Rice requested still stricter admission requirements after one of his instructors was “felled to the floor by a single blow from a student who took offense at criticism of his work.”

In 1904 the state legislature appropriated $250,000 for the construction and outfitting of buildings for the New York State College of Agriculture at Cornell. It wasn’t until 1906 that the college really began to operate as a fully state-supported unit. In April of that year the governor approved an appropriation of $100,000 for maintenance of the college.

Public interest was stimulated by the new status of the College of Agriculture. Undergraduate enrollment increased 22 percent from 1905 to 1906. Scholarships were beginning to be offered by private individuals and public organizations such as the Grange. Director Liberty Hyde Bailey said in his annual report that although enrollment had greatly increased, there had been no parallel increase in faculty or facilities. He expressed the hope that new construction would soon be completed to ease the situation.
Under the guidance of Director Bailey, who became the first dean, the new College developed rapidly. Enrollment doubled and redoubled between 1906 and 1914. At the same time the various departments of the college were being organized and provided with facilities.

Registrations remained high until 1917 and 1918, when enrollment in all courses dropped sharply. The number of students in 1918-19 was less than half the 2,584 total for 1915-16.

Only a part of this decrease was attributed to the war in Europe. Other factors cited were the increasing number of agricultural schools in other states and within the state, and the availability of good jobs in industry.

Enrollment figures seem to have been considerably affected by the state of economic conditions. From World War I through the Twenties the enrollment remained relatively low, and even declined a bit toward the end of this period. As the depression hit, registrations began to climb. This phenomenon can be explained in part by the fact that because of the scarcity of work people who could manage to do so took training in agriculture with the thought that if they could do nothing else, they could at least raise something to eat. A "back to the land" movement is a traditional occurrence during times of depression. The simple fact that there was nothing else to do may also have encouraged some to go on to college if they could afford it. The few people who did have jobs during the depression were those who had received higher education, and the realization of this fact was probably an added incentive for going on to college.

In the early forties most of the population was either in the Armed Services or involved in the production effort at home. Few were left to study. The enrollment fell to a low of 561 undergraduates in 1944. Most of the civilian men on campus during those years were under enlistment age or were physically unfit for military duty. Groups of Army and Navy men receiving special training at the University marched to and from classes in formation.

Immediately after the war, colleges all across the country were filled to overflowing with students returning from leaves of absence and men cashing in on the G.I. Bill. During the late forties the College of Agriculture swelled to its largest size ever, but by 1951 the post-war boom was over. From that time until about 1960 the size of the College remained relatively constant, with only minor fluctuations in registrations. Since 1960 there has been a sharp increase in the number of applications for admission. This trend is expected to continue as post-war babies approach college age.

Undergraduate registration in September 1962 was the largest in the College's history, with 1,920 students enrolled in the 18 departments of the College of Agriculture. An additional 725 graduate students were also majoring in agricultural fields.
For transmitting power...or conveying, nothing does it like Link-Belt chain.

For day-in, day-out service, nothing can match Link-Belt chain's strength and endurance...its positive efficiency...which add to the reliability of farm equipment drives and conveyors.

Today, over 300 farm machine manufacturers obtain this reliability from Link-Belt. Experience has shown them that chain marked with the double-arrow >_< trademark is made to high standards...has consistent quality and pitch uniformity...will maintain rated performance and efficiency on their machines.

Link-Belt offers industry's most complete line of drive and conveyor chains, chain attachments and sprockets. Also "bonus" services that aid the designer, improve the design: application counsel, field analysis, laboratory service and others. These services multiply the value of Link-Belt chains, but not the price!

For transmitting power...or conveying. nothing does it like Link-Belt chain.

For day-in, day-out service, nothing can match Link-Belt chain's strength and endurance...its positive efficiency...which add to the reliability of farm equipment drives and conveyors.

Today, over 300 farm machine manufacturers obtain this reliability from Link-Belt. Experience has shown them that chain marked with the double-arrow >_< trademark is made to high standards...has consistent quality and pitch uniformity...will maintain rated performance and efficiency on their machines.

Link-Belt offers industry's most complete line of drive and conveyor chains, chain attachments and sprockets. Also "bonus" services that aid the designer, improve the design: application counsel, field analysis, laboratory service and others. These services multiply the value of Link-Belt chains, but not the price!

For transmitting power...or conveying. nothing does it like Link-Belt chain.

For day-in, day-out service, nothing can match Link-Belt chain's strength and endurance...its positive efficiency...which add to the reliability of farm equipment drives and conveyors.

Today, over 300 farm machine manufacturers obtain this reliability from Link-Belt. Experience has shown them that chain marked with the double-arrow >_< trademark is made to high standards...has consistent quality and pitch uniformity...will maintain rated performance and efficiency on their machines.

Link-Belt offers industry's most complete line of drive and conveyor chains, chain attachments and sprockets. Also "bonus" services that aid the designer, improve the design: application counsel, field analysis, laboratory service and others. These services multiply the value of Link-Belt chains, but not the price!
and beautiful crops pair up naturally because copper sulfate overcomes many of the fungus diseases that spoil fruits and vegetables. It is available in the correct form for quick and easy mixing.

Other uses of Triangle Brand Copper Sulfate: In fertilizer, to put copper back into the soil. In animal feed, as a dietary supplement to build blood. In water treatment, to destroy algae in ponds, and tree roots in sewers and storm drains. As a wood preservative. Triangle Brand Copper Sulfate is a friend to ranchers and growers. Economical and safe to use. Write for further information.
President Malott-
Reflections on the past and future... p. 1
Dear Sir:

In spite of the present financial and personnel crises confronting "The Cornell Countryman," I sincerely hope that these problems can be overcome. The publication has enough vitality to stay alive.

Your adopted recommendation carries the best features for the renewed survival of our magazine.

Sincerely,

Headley E. Bailey '30
225 E. 106th St.
N. Y. 29, N.Y.

P.S.: Maybe the Alumni would agree to a small self-imposed tax or contribution.

H.E.B.

Dear Dean Palm:

I am very much pleased to learn from the last issue of the Cornell Countryman that steps are being taken to change the character of that publication. Even though the Countryman is handled by the student body, it nevertheless reflects the College in the minds of its readers. Of late years I have been greatly disappointed in the quality of the Countryman in that it was so far below the high standards of the institution which in a way it represented. I have several issues of the Countryman in the early years of its life. It is an inspiration to review them.

I feel that the College needs the Countryman as a means of contact with its Alumni. Your publication "Farm Research" is most interesting and valuable, but there is plenty for a well edited Countryman. It would not conflict with the Cornell Alumni News.

Very truly yours,

E. H. Thomson, Ag '09
551 Longmeadow St.
Longmeadow, Mass.

With deep regret and a few tears did I read the February issue of the Countryman and your message contained within. My respect to you for handling a rather difficult situation—a situation that had been coming on for years (and in a game of Russian roulette someone gets shot).

As a former Countryman editor (and I'll bet that the damn skylight still leaks) I can only hope that the new position of the Countryman will be one that will continue both the name and spirit of a fine publication—a publication bathed in much "blood, sweat and tears."

However, I have not written this letter as an emotional release. Rather, and I hope that it is not too late, I offer my services in the capacity of alumni coordinator. If space could be allotted in future issues I would be glad to collect alumni information (both foreign and American: agricultural alumni) at my own expense, write a column relative to alumni and strive to get alumni to either write articles or to direct information to the editorial staff.

I would appreciate your passing this letter along to those individuals who will be responsible for this magazine's future.

Again may I congratulate you on a very difficult job that was well done.

Respectfully,

Dr. Gerald P. Hirsch '59

The Cornell Countryman is published monthly from October through May by the New York State College of Agriculture, 490 Roberts Hall, Cornell University, Ithaca, New York. Second-class postage paid at Ithaca, New York. Printing by Norton Printing Co. of Ithaca. Subscription rate is $1.75 a year or two years for $3.25; three years for $4.50; single copies, 25 cents. A member of Agriculture College Magazines Association. Represented for national advertising by Littell-Murray-Barnhill, Inc., 369 Lexington Avenue, New York 17, N.Y.
Reflections on the Past and Future

by Barbara Allen '63

Deane W. Malott will be retiring as the sixth president of Cornell this summer. Speculation has arisen as to his plans for the future. The demands on his time leave little opportunity to think about this. He and Mrs. Malott, however, will be staying in Ithaca for a while to give him time to "catch up on" himself. Although he does not expect to have any official responsibilities in connection with the University after his retirement, as President Emeritus he will continue to serve on various outside boards and commissions.

When asked how he believes Cornell has changed since his arrival in 1951, the President noted that expansion of facilities was an evident feature. More important to him, however, is the recognition that the general level of interest in academic affairs of the University has risen markedly. He feels that this is a trend in most of the Nation as well, as evidenced by the increasing number of students continuing with graduate study.

Mr. Malott believes that students today have a greater understanding of the country's problems. In serving this more vigorous group of students, the University will continue to need more able and interested professors and investigators. In this way, academic strength is built, stated the President. He is also proud of the closer relationship between the students, faculty, and the administration, and of the increasing interest in providing library and laboratory facilities for all. The President said Cornell is first and foremost a teaching institution. All other endeavors are part of an effort to provide better and more stimulating teaching within the University.

When asked to name the achievement of which he is most proud, Mr. Malott first said he wished to make clear that all achievements are the work of many individuals, not only himself. He feels that the building of more and better library facilities has been one outstanding feature of his years at Cornell. Among those new or improved library facilities begun during his administration have been the Mann, Olin, and Uris libraries, the facilities for the Hotel, Engineering and Industrial and Labor Relations schools, and the new Medical and Nursing Library at the Cornell Medical Center in New York. Perhaps the single most significant advance in facilities on the campus is the Olin Graduate and Research Library.

In discussing the future of the state colleges at Cornell, President Malott stated that he thinks of each of them as individual teaching institutions. He mentioned several of the outstanding contributions each has made to education. He is proud of the College of Agriculture for its role of importance in the economy of New York State and of many parts of the world. The College of Home Economics continues to be an institution where "innovations and experiments in the education of women are espoused." It is also a place which makes available a professional education combined with a broad cultural education. The Veterinary College, being the only such college in the Northeast, is particularly distinguished. President Malott stated that the School of Industrial and Labor Relations is in the lead of those attentive to some of the world's most important political, economic, and social problems.

In addition to his concern with the quality of American higher education, President Malott is also interested in international education.

My final question to President Malott was directed at his personal thought about the future of Cornell and similar institutions of higher education. His answer has particular significance because it reveals his basic philosophy and feeling towards the importance of education. Mr. Malott stated that he feels the only chance this country has to maintain its democratic character is to have an ever-increasing number of broadly educated men and women.

This thought was contained in his address to the University of Liberia when he said, "As I see it, the great civilization of the mid-twentieth century will never fall because of lack of professionally trained people, badly needed as they are in the great fields of medicine, agriculture, business, and law. Our real danger is that there will not be enough people to maintain the basic freedoms of democratic government."
A visitor walked into Warren Hall and looked at the directory on the wall. As he stood there, his attention was diverted by the conversation of a group of students in the background. "... I'm long three Chicago July Beans, but the market looks bearish... go short July wheat with a two point stop... Chrysler Corp. will split two for one..." The visitor wondered for a moment if he was in the right building. He thought this was a college of agriculture.

He was in the right building, and the students were in the agricultural business program. If someone told him this, the visitor would probably wonder, what is agricultural business? Running a farm? Selling eggs? The answer is confusing. It could be many things. To tell what the agricultural business program really is requires a brief explanation of its development and purpose.

As you can see the College of Agriculture's course listings for the past 40 or 50 years, distinct changes in the kinds of courses given can be noted. The Agricultural Economics Department of today started out as two departments—Farm Management and Rural Economy. In 1919, these departments were combined into one.

During the 1920's, an interest in marketing and business management developed in this department. It was prompted by a growing concern outside the University with farm prices and marketing, and led to the allocation of funds to the department to pursue research in this field. Then new courses were offered. For example, in 1924-25, two courses in accounting and a course in business management were added; in 1928 a course in sales management and in 1929, a course in business law. Thus the agricultural business program was conceived.

Since its conception in the 1920's, agricultural business has become the only undergraduate business program in the University. Its contents include courses in arts and science, along with those in business management and marketing.

There are three programs in agricultural-business which a student can enter: the 4-year program leading to a bachelor of science degree, and emphasizing business management and marketing; a 5-year program leading to bachelor of science and master of business administration degrees, which offers more intensive training in business administration; and a graduate school program, with the emphasis on research, where a candidate may pursue a master of science or doctor of philosophy degree.

What caused this new interest in the department? Actually there were several reasons. One was the decreasing number of farms and farmers in New York State. This trend started around 1900 and has continued over the years. In an interview, Prof. Kendall S. Carpenter pointed out that because of this trend, many students in agriculture cannot depend on going back to their fathers' farms to make a living. As a result, the College of Agriculture gives these students the training that will enable them to make a living elsewhere.

Prof. Wendell G. Earle gives another reason for the evolution of the agricultural business program: all problems in agriculture do not lie with the commodities themselves. Many problems develop in management practices and marketing methods. Men in agricultural economics at Cornell began to place more emphasis on business management and marketing.

Another reason is cited by Professors Glenn W. Hedlund and Lawrence B. Darrah. According to them, the development of the program was aided by the high degree of freedom permitted professors, departments, and colleges at Cornell. This enabled many business courses to be offered earlier than they would have been if professors were forced to conform to strict curriculum requirements in establishing new courses.

In the past four or five years, agricultural economics students have shown more interest in business management and marketing courses. Lowering the practice requirement from 40 to 25 credits and allowing many students to earn all of their credits from non-farm jobs may be one reason for this interest. There have also been more students from non-farm backgrounds in the program than in previous years.

To get an idea of student feeling, I talked with four who are in the five year agricultural business program. (The 4th and 5th years of the 5-year program are spent in the Graduate School of Business and Public Administration.) Of these four only one comes from a farm, but he does not plan to return to it. Only one student was in the program from his freshman year on. The other three started out in scientific or technical fields and switched to agricultural business early in their college careers.

Only one real complaint was voiced. Three of the students said that the business courses in the department emphasized small business operations too much. The students felt, however, that the agricultural economics business courses gave them a back-
### MARKETING 140 PRELIMINARY FUTURES PRICES

<table>
<thead>
<tr>
<th>MARKET</th>
<th>ITEM</th>
<th>DATE</th>
<th>OPEN</th>
<th>CLSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHICAGO</td>
<td>WHEAT-JULY</td>
<td>3/7/62</td>
<td>179</td>
<td>179</td>
</tr>
<tr>
<td>CHICAGO</td>
<td>CORN-JULY</td>
<td>3/7/62</td>
<td>159</td>
<td>159</td>
</tr>
<tr>
<td>CHICAGO</td>
<td>SOYBEANS-JULY</td>
<td>3/7/62</td>
<td>258</td>
<td>258</td>
</tr>
<tr>
<td>CHICAGO</td>
<td>EGGS-SEPT,</td>
<td>3/7/62</td>
<td>4.19</td>
<td>4.19</td>
</tr>
<tr>
<td>N.Y. POTATOES</td>
<td>NOV.</td>
<td>3/7/62</td>
<td>3.40</td>
<td>3.40</td>
</tr>
</tbody>
</table>

**Students study the future market before entering the business world**

They felt that the program as a whole is giving them a good education with which to pursue their careers in business.

After graduation, then what? The agricultural business program does not limit its training to the management of agriculturally related businesses. It stresses general business management which gives the student mobility in his career choice. Because of this, graduates of the program can be found in fields such as food-store management, food-processing management, commodity and stock brokerage, banking, market research, government service, and college teaching. Actually, if you were to ask anyone connected with the agricultural business curriculum where its graduates go after college, you would get no one answer. They go to many places and fill many and various positions.

The program's success is enhanced by the satisfaction of its students and the successful pursuance of careers of their choosing.

---

**IT'S SPRING**

And this most welcome season is certainly evident in the CORNELL CAMPUS STORE.

The COED SHOP is now featuring cotton skirts, blouses, bermuda shorts, and T-shirts for campus and sportswear.

**THE MEN'S DEPARTMENT**

is now featuring Madra, Plains, Paisleys, and Stripes sport shirts, ties, belts, hats, swimsuits, and Bermudas.

Come in and give your wardrobe a Spring Lift.

---

**Cornell Campus Store**

Barnes Hall
State College of Home Economics at Cornell

As a part of Cornell University—a Land-Grant institution—and a unit of the State University of New York, the College of Home Economics is responsible for teaching students, engaging in research, and for cooperating with 55 County Extension Service Associations in the conduct of an educational program in home economics for homemakers and youths.

Approximately 80,000 homemakers and 38,000 4-H Club members participate actively in home economics Extension work, but more than a million are reached annually by the home demonstration agents via mass media and through programs conducted with other organized groups in the counties.

The College also conducts an Extension public information program via the press, radio, and television. Annually it distributes more than 600,000 home economics Extension bulletins written to help the people of the State keep abreast of information applicable to the solution of their problems as family members, consumers, and citizens.

Helen G. Canoyer, Dean

No. 7 in a series from the New York State College of Home Economics, a unit of the State University, at Cornell University, Ithaca, N. Y.
The completion of Helen Newman Hall, the new women’s athletic building, is expected to increase the importance of physical fitness and education to Cornell women. It will be completed this spring and will come into full use in the fall.

Located alongside Beebe Lake, the building occupies a convenient position close to the women’s dormitories. It is the gift of Floyd F. Newman, a Cornell alumnus, and named in honor of his wife. (Mr. Newman also donated one million dollars to the Cornell Laboratory of Nuclear Studies, which is named after him.)

Facilities for sports, ranging from bowling to riflery, will be provided in the new building. Sixteen bowling lanes will be in operation during the day and evenings for open and league bowling; and will be available for use by the Cornell community as well as by the department. A double gymnasium above the alleys will furnish space for badminton, basketball, indoor tennis, fencing, judo, folk and square dancing, volleyball, gymnastics and apparatus work. The floor space will be lined for two crosswise basketball courts or one lengthwise tournament court. It is also to be lined for eight badminton courts.

Indoor tennis practice will be possible, as the gym is to be equipped with a ball boy machine and an adjustable rebound net. Apparatus equipment will include a trampoline, balanced boom, flying rings and ropes. A small permanent gallery will accommodate spectators to public events.

A windowed dance room overlooking the lake will be on this floor too, to be used exclusively for modern dance instruction and presentations.

The 75’ x 37’ swimming pool will be another attractive feature of the building. It will be equipped with two diving boards and underwater lighting and underwater sound. A gallery similar to the gymnasium gallery provides spectator seating during synchronized swimming shows and competitive events.

A club room and lounge are located on the top floor. These rooms will be comfortably furnished for informal use such as post-game gatherings and Women’s Athletic Association meetings. Also on this floor are the physical education department offices and the galleries.

Unique features of the building are the rifle range and corrective room, a small room specially equipped for individual gymnastics. A small men’s shower area with forty-eight lockers is included along with regular locker space for women, thus providing the opportunity for coed activities.

Basketball and badminton will be added to the regular physical education class program and other sports will be improved. Swimming, now limited to a small night program at Teagle, will benefit particularly. Synchronized and competitive swimming will now be offered along with all levels of instruction. Fencing and judo, new this year, will also gain from increased space. The indoor tennis facilities will bring an end to rained-out tennis classes. Also, upperclass women will have a greater opportunity to participate in physical education classes as the staff will probably be expanded.

The W.A.A. expects to establish a more active extramural program. Extramural activities will be offered in any sport where interest is shown. It is anticipated that more girls will become involved in extramural activities, and interested in taking extra physical education instruction. The building definitely will play an important part in the lives of Cornell coeds.
Caves have long been a source of wonder to man. To the Greeks, they were the entrances to Hades. In many cultures, they were a place of worship. Caves were used as hideouts during the American Revolution and as stations of the Underground Railroad during pre-Civil War days.

Caverns deep under the earth present a real challenge to the adventuresome. Courage, endurance, determination, resourcefulness, and precision are necessary to penetrate to the depths of the earth. But the thrill of discovery by a member of the Cornell Grotto far outweighs the dangers and difficulties encountered, and these students have the interest, strength and stamina to go beyond the explored parts of underground passages.

Caves with entrances in the sides of cliffs are easily accessible. However, for caves with pit entrances, often one hundred feet or more in depth, Cornell Grotto members use ropes and cable ladders for descent. Ropes alone are sufficient for entering the cave, but the ladder is a welcome assistance for getting out. Safety ropes are a necessity as one slip on the ladder can be fatal, and ladders have been known to break at crucial moments.

Beyond the entrance awaits wet blackness. Here, proper equipment can make the difference between an adventure and a nightmare. Most Cornellians prefer carbide lamps as their principle source of light. The fuel, calcium carbide and water, is inexpensive and easy to carry. The lamp clips onto the helmet, leaving the hands free for climbing.

Two other sources of light should also be included in the equipment, usually a flashlight and a plumber’s candle. Extra carbide and matches can be carried in any waterproof container such as a plastic baby bottle. If the cave is dry, water for the lamps is a necessity. A helmet, in addition to being a carbide lamp holder, is a must to protect the head from falling rocks and low ceilings or stalactites. However, carrying anything more than is absolutely necessary can create problems in tight crevasses and crawlways.

Once in virgin territory, the caver is on his own. He must do without the aid of maps, and the legendary ball of string is not practical. Getting lost can be avoided by taking note of the cave formations and the direction of the passages. If the cave is a maze and difficulties in finding the way out are anticipated, the carbon from the flame of the carbide lamp can be used to draw an arrow indicating the direction out.
Caves present some interesting challenges to the novice. Mud covered rocks are precarious footholds. Loose rocks make worse handholds and leave scars on the arm. Cave passages often have active streams running through them. It is difficult to see the bottom if the water is over a foot in depth and sudden deep holes are not uncommon. If the cave walls are close enough together, it is possible to climb up onto the walls and chimney across the water. Chimneying is also good for getting across deep holes or getting in or out of pits.

Passages may dip down below the water level for some distance, but for the determined, only an inch or two of breathing space is no reason for turning back. However, scuba diving equipment is necessary for long, completely water-filled passages, but the cavern may continue for miles above water once the initial barrier is passed. A spelunker must also be alert for flash floods which occur in some caves when there is an exceptionally heavy downpour outside, and spring thaws make some caves inaccessible during that time.

Tight crawlways require much wriggling and squirming, and getting stuck in one of these is always a possibility. Often it is necessary to backtrack to retrieve pants that have stayed behind while the caver has crawled on. But to the avid spelunker, these difficulties only represent challenges to be overcome.

Exploring virgin territory is only one of the rewards of the determined spelunker. Large, beautifully white flowstone "draperies" cover the walls. Hollow calcite "soda straws" hang from the ceiling. Stalactites and stalagmites often join to form huge columns. Exquisite flowers of gypsum crystals are a rarity but are well worth looking for. Nature will sometimes put a new twist in her cave decorations and come up with some interesting variations. These formations, unmarred by muddy hands and out of reach of cave vandals, await the adventuresome explorer.

Editor's Note:
The Cornell Grotto of the National Speleological Society (NSS) is a group of Cornell students and NSS members in the Ithaca area who are interested in caving. The Grotto is organized within the Cornell Outing Club and sponsors caving trips, slide shows, and other activities connected with the scientific and sporting aspects of caving. THE DRIPSTONE, edited by the author, is the official newsletter of the Cornell Grotto and includes trip reports and other articles related to caving. The Grotto meets on Wednesday evenings at Japes Lodge directly after the Outing Club meeting which begins at 7:30. All those interested in caving are invited to attend.

Water, containing dissolved calcium carbonate, seeps through the rock and forms droplets on the ceiling of the cave. The water evaporates, leaving a calcium deposit. This deposit grows at the rate of about one cubic centimeter per hundred years and so stalactites are formed. Stalagmites, building up from the floor, are formed by water dripping on one particular spot and then evaporating for many centuries.

Impressive passages have been carved out of the rock by water. The flat ceiling is a harder limestone layer above the limestone in which the cave was formed.
GLENN DAVIS:
One of the Boys

by Martin Krasner '63

If you are looking for a coaching job and you are much over 40, you can save your time and energy by forgetting about Cornell. It’s no secret that Cornell is looking for youth and reputation in its new coaches. Tom Harp, who was 33 and head football scout at West Point when he was hired by Cornell two years ago, was the youngest football coach in the Ivy League until this winter. Raoul Sudre, who was hired at the tender age of 22 last year and was named "Fencer of the Year" by the NCAA in 1960, is the youngest fencing coach in the United States. And 39-year-old tennis coach Eddie Moylan compensates for his grey hairs with one of the foremost tennis reputations in the country.

A recent step in the Cornell youth movement was the selection of 28-year-old Olympic track star Glenn Davis as assistant track coach this fall. Heir-apparent to the head track coaching position which will be vacated by the retirement of Lou Montgomery in three years, Davis is the epitome of what Cornell is looking for in its new coaches. He is young enough to teach by demonstrating, and he is famous enough to attract top high school track stars who would visit the campus merely to meet the great Glenn Davis.

In a day and age when track records are broken and reset at about the same pace that satellites are orbited, Davis still holds two world records which he set back in 1958. His times of 49.2 seconds in the 400-meter hurdles and of 45.7 seconds in the 440-yard run are among the most challenging obstacles for aspiring young record-breakers.

One of the most renowned athletes ever produced at Ohio State, Davis won gold medals at the 1956 Olympic Games at Melbourne, Australia, and at the 1960 Olympics at Rome, Italy, in the 400-meter hurdles. His 1956 victory tied the world record of 45.5 seconds, and his 1960 clocking established a new Olympic record of 49.3 seconds. In the 1960 Olympics, Davis also ran third leg on the United States' championship 1600-meter relay team which set a new world record of 3:02.2. Davis' clocking was 45 seconds.

Perhaps one of the best coaching qualifications which Davis brings to Cornell is an incredible versatility. In his college days he competed in seven different events, won ten conference titles and holds the Big Ten record for most points scored by an individual in one meet. At high school, Davis once won the state championship for Barberton (Ohio) High single-handedly by scoring three firsts and a fourth for his team. In addition to his record times in middle-distance running and hurdling, Davis has run 100 meters in 9.8 seconds and 220...
yards in 20.9 seconds, he has broad jumped 24'11 3/4", pole vaulted 12'9" and high jumped 6'4".

After the 1960 Olympics, Davis played professional football with the Detroit Lions, where he was nicknamed "The Zephyr" (breeze) by Joe Schmidt. The following year the Lions named their attack the "Zephyr Offense" after their fleet end.

Although he has lost most of his speed (the longest distance he now attempts is 80 yards, and he cannot beat Cornell middle-distance runner Fran Smith even at that length), Davis still has the form and ambition which made him a champion. And he still has enough vigor to work out with the team. In his role as one of the boys, Davis has established a rapport and self-respect with the squad members. One hurler says of Davis, "He fits right in with the crowd; but while we consider him one of us, we have tremendous respect for his know-how and experience."

One challenging problem for Davis is Steve Machooka, the outstanding Cornell distance-runner who insists on being his own coach. But Machooka recently told Davis that he will give him his cooperation, and the new assistant coach thinks that Machooka could become one of the best runners in the world and could easily join the no-longer-elite fraternity of four-minute milers. "He has natural speed, he's thin and he has no trouble carrying his weight, and he doesn't seem to tire like most other runners," says Davis of Machooka. "But I don't think he believes in training hard, and he's going to have to make his own choice."

While he advocates that every runner develop his own style of running rather than copy someone else's, Davis insists that hard work is a "must" for the style of any would-be winner. When he himself trained for a big meet, he practiced by running against two or three opponents, replacing each as he wore him out. In college he became so exhausted by competing in up to seven events each weekend that he had to spend the first two days of each week merely recuperating.

One of the major points of departure between the Davis and Montgomery methods of coaching is in the question of whether runners should train by overdistancing or underdistancing. Davis, unlike Montgomery, believes that a runner should practice at distances equal to or less than the distance at which he competes. Davis never ran more than 440 yards in practices.

In most areas of coaching theory, Davis agrees with his highly-respected superior. He knows that he can learn a great deal from Montgomery, who helped him for the 1960 Olympics.

The challenge awaiting Davis at Cornell is great, but he is a man who thrives on challenges.
Alumni often ask the question: What are the Opportunities for Students Preparing to Teach Agriculture in New York State High Schools?

There is a critical need for qualified teachers of agriculture to fill the teaching positions open each year in New York State high schools. These teachers are needed to fill vacancies created by those who retire or go into other professions. In many cases they may start new agricultural departments or enter multiple teacher departments. For a number of years, both in New York and neighboring states, the demand for teachers of agriculture has been greater than the supply. More than 30 percent of the teachers of agriculture have had twenty years or more of service in this field.

In New York State there are 273 high schools offering courses in agriculture. Approximately 30 new teachers are needed each year to fill the vacancies in these schools. The enrollment in agricultural classes has increased steadily over the past ten years with more than 12,000 students enrolled today.

Dramatic changes are taking place today in agriculture. While the number of farms and persons engaged in farming has declined substantially, the number of persons working in the broad field of agriculture makes up about one-third of the nation’s labor force. This includes the production, processing, distribution and marketing of farm products and service to farmers. The production of agricultural products has shown an upward trend particularly during recent decades. This increased production and efficiency on New York farms has come about largely through research, education and mechanization.

The farmers of the future will need to be better educated to cope with the increased complexity of management, mechanization and marketing. Agricultural education in high school plays a vital role in providing this training.

In addition to employment opportunities in farming there are many other agricultural occupations in which trained workers are needed: Agricultural business, agricultural industry, agricultural professions and agricultural services.

Teaching agriculture is a challenging profession. The teacher develops his program based on the agriculture of the area and the needs of his students. His teaching facilities include a classroom, shop and the farms of the area. Through the combination of class and shop instruction with on-farm instruction and farming programs the student learns farming and related skills by performing these activities.

The major areas of instruction include: Management of a farm business, agricultural mechanics, production of major farm products, conservation, and leadership training.

In the classroom the teacher guides students in recognizing problems arising on their home farms, on cooperating farms or in connection with their farming programs. These problems are then analyzed and students are presented with various types of resource materials to be used as a basis for making a decision and developing a plan for solving the problem and applying the solution to the farming situation.

Approximately fifty percent of the instructional time in agriculture in high school is devoted to agricultural mechanics. Instruction is provided in the areas of farm power and machinery, farm shop, farm structures, farm electrification and soil and water management.

The teacher of agriculture, unlike most teachers, is employed on a twelve month basis receiving additional compensation for his service, including cost of travel, during the summer. Young farmer programs

Record keeping is an important part of a students farming program in agriculture. The teacher of agriculture reviews these records periodically with each student and guides the development of the program.
are organized to provide continuing instruction both in the school and on the farm for young men of the school area. Frequently the teacher of agriculture receives additional compensation for providing this service.

The local chapter of the Future Farmers of America provides the teacher with an opportunity to guide the development of leadership in its members. All students enrolled in agricultural courses have the opportunity to join this organization. Each teacher of agriculture serves as advisor to a local FFA chapter.

To obtain a certificate to teach agriculture in New York State a student must graduate from a four-year college of agriculture with a major interest in agricultural education. There are certain specific requirements both in technical courses in agriculture and professional courses in education that must be met during his college program.

In New York State the teacher training in agricultural education is provided at the New York State College of Agriculture at Cornell University. Here the student gains an understanding of basic sciences and social studies along with training in various fields of technical agriculture. His professional training includes a full semester of practice teaching at a selected high school where he will work under the guidance of a teacher of agriculture. At Cornell a student can delay making the decision to teach agriculture until the middle of his junior year. It is better, however, if this decision can be made earlier because of the variety of courses needed for certification.

The beginning salary for a teacher of agriculture is $5400 on a twelve month basis. This increases to $8160 by the end of ten years during which period the teacher has completed his Master's Degree or 30 semester hours of credit beyond the baccalaureate degree.

---

**COUNTRYMAN CAPSULES**

At the invitation of Governor Rockefeller, Dean Charles E. Palm and members of the faculty presented the story of New York State's Changing and Adjusting Agriculture in Albany on March 26. Members of the legislature and others were invited by the Governor to attend the presentation.

* * *

Dr. Helen G. Canoyer, Dean of the College of Home Economics and Chairman of President Kennedy's Consumers Advisory Council, met with the latter group in Washington, D. C. on March 20-21.

* * *

Robin A. Brown, Class of '64, captured top honors in Cornell's Eastman Stage, the only public speaking contest held in an agricultural college in the U. S. Brown, an Englishman who now lives in the Bronx, won the $100 award with the topic "Socialized Medicine Does Work." Clinton E. Wise, '64, of Medina, N. Y., was awarded the $25 second-place prize. He spoke on "The Paradox of Parity." Brown and Wise competed with six finalists from an original group of 20 contestants.

* * *

A western New York boy, Carl L. Eisenhard of Warsaw, is the ninth annual winner of the Cornell-Swedish Exchange Scholarship. A sophomore in the College of Agriculture, he will leave in June for one year of work and study in Sweden. Eisenhard is majoring in animal husbandry and ranked 20th in a class of 430 at the end of his freshman year.

* * *

John L. Welsh, '65, a sophomore from Altamont, N. Y., leaves in late June for a year of study at the University of Buenos Aires, Faculty of Agronomy and Veterinary, Buenos Aires, Argentina. John has spent the last year studying Spanish in preparation for the Cornell-Argentina exchange scholarship. He is currently registered in the biological sciences curriculum in the College of Agriculture.

* * *

Prof. Katherine Reeves, College of Home Economics, was appointed to the advisory committee of nursery education at the Agricultural and Technical Institute at Cobleskill.

* * *

The Queen of England consented to lend two rare Canaletto prints, never before seen in America, to Cornell University so it could exhibit a complete collection of the etchings of the 18th century Venetian master in the Andrew Dickson White Museum.

* * *

Cornell scientists began an all-out study of cabbage stored this winter under special conditions in an effort to make the New York State cabbage producer's strong position even stronger. It is hoped experiments will lead to fresh, green stored-cabbage that will be competitive with cabbage shipped in from the South during winter months.

* * *

Three Guernseys of Cornell's McDonald Farms, Cortland, were named All-Americans by the American Guernsey Cattle Club. Two others were acclaimed Reserve All-Americans and two more received honorable mention awards. Also, a senior yearling bull, bred and sold by McDonald Farms and shown by Ansmill Farms, Hillsards, Ohio, captured All-American honors.

* * *

James C. Preston '50 Genesee County agricultural agent for the past 10 years, was named assistant state leader of country agricultural agents.

11
CORNELL PLANTATIONS--
A LABORATORY OF GRAND ORDER

by Albert Beilby '63

The cheerful song of a bird, the soft rush and rustle of the wind through the forest, the incessant hum of insects, the snapping of twigs and the crunching of dried leaves. These are only a small part of an irreplaceable and invaluable heritage; one which man, with all his ingenuity cannot create: the quiet dignity of nature.

Cornell is fortunate in having an organization dedicated to fostering and preserving areas where faculty, students, and the public can share the education aspects and the quiet loveliness of an undisturbed environment. This is Cornell Plantations.

This organization, administered by an interdepartmental committee and directed by George T. Swanson, is unique in its size, goal, and accomplishments. The early development of the Plantations covered a period from 1935-1941, when a Civilian Conservation Corps camp existed at Cornell. CCC men supplied the labor to ready the land and to make the plantings. In 1944, the name suggested by Liberty Hyde Bailey, "Cornell Plantations," was adopted.

Approximately 1500 acres comprise Cornell Plantations at present. This year, about $35,000 will be required to finance Plantations' operation. Since only part of this is provided for by appropriations, private gifts are heavily relied on to meet the need.

Cornell Plantations does not encompass all of the growing trees and shrubbery at the University, but exists as a definite geographic entity. However, the boundaries are quite nebulous, which has lead one professor to comment, "Cornell Plantations is more of a concept really...and it has some land".

Dr. Richard M. Lewis, who became Curator of Cornell Plantations in August, is presently mapping the lands. Moreover, he is helping to plan its development as an outdoor laboratory for future generations.

Students, who frequent the Ellis Room in Mann Library, may have noticed the small magazine *The Cornell Plantations*. The purpose of this quarterly, edited by Mrs. Audrey O'Connor, is to publicize the scope and purpose of the plantations and to gain the support of persons who enjoy things that grow.

It is difficult to describe all that Cornell Plantations has to offer. Perhaps the most striking feature—a place of collections, an Arboretum. One of the most valuable of these is the 20-acre Viburnum Collection, located in the vicinity of the University filter plant. There are also collections of lilacs, peonies, rhododendrons, nut trees, and the beautiful flowering crabs.

The "natural areas," such as the one behind Warren and Fernow Halls, are probably the most exciting single feature of the whole enterprise. In these areas, plants grow without being influenced by man. Here, classes in nature study, ornithology, mammalogy, botany, and horticulture can study their subjects in native habitats. The botanists can study the life cycles of various plants, from the first tender shoot to the dead and decaying log of a onetime forest giant. A wide selection of plants and animals live in such an environment, and a veritable treasure trove of knowledge awaits each person who ventures forth.

The accessibility of the Plantations for field trips saves a considerable amount of time, money, and effort without the least sacrifice of quality. Consider the plight of Prof. Harlan P. Banks of the Botany Department. He has about 500 students in his Introductory Botany classes, and, during the year, there are four field trips. You can easily envision the confusion and expense that would be involved to cart these students off-campus.

The Department of Plant Pathology finds the Plantations useful for the study and research of plant diseases, and is growing experimental trees there. Dr. Wayne A. Sinclair, carrying on the work of Dr. Donald R. Welch, is studying certain elms that show a degree of resistance to the Dutch elm disease. The department can teach students to recognize diseased plants by the simple expedient of pointing a finger.

Prof. E. L. Stone of the Agronomy Department often uses MacGowan Woods in the study of forest soils. These woods border the game farm, about a mile east of the campus.

Prof. William Brown of the Entomology Department is currently conducting experiments that involve certain ants which seem to delight in transporting the seeds of the thistle about. Dr. Roger A. Morse, of the same department, sets his hives among the trees, thereby keeping bees and people separated. Students in landscape drawing and nature study find the land abounding with potential subjects.

Yes, Cornell Plantations is a laboratory of a grand order.
More Countryman Capsules

Rochester area teachers and their students gave top rating to a Cornell University professor’s educational TV program, “Predators—We Need Them!” Richard B. Fischer, associate professor of nature and conservation in the rural education department, prepared the 30-minute video tape for the Rochester Area Educational Television Association. It was viewed by more than 50,000 school children in the 12-county area around Rochester.


The placement office at the College of Home Economics reported 380 job requests for graduates. Miss Esther H. Stocks, placement director, predicts an increasing number of requests within the next three months. So far, the largest number of requests—182—has come from the education fields.

Dr. Leo Lutwak, an authority on mineral and energy metabolism, was appointed professor of clinical nutrition in the faculty of the Graduate School of Nutrition, effective July 1. He is presently senior investigator, Metabolic Diseases Branch, National Institute of Arthritis and Metabolic Diseases, National Institute of Health, Bethesda, Md.
For transmitting power...or conveying, nothing does it like Link-Belt chain.

For day-in, day-out service, nothing can match Link-Belt chain's strength and endurance...its positive efficiency...which add to the reliability of farm equipment drives and conveyors.

Today, over 300 farm machine manufacturers obtain this reliability from Link-Belt. Experience has shown them that chain marked with the double-arrow > < trademark is made to high standards...has consistent quality and pitch uniformity...will maintain rated performance and efficiency on their machines.

Link-Belt offers industry's most complete line of drive and conveyor chains, chain attachments and sprockets. Also "bonus" services that aid the designer, improve the design: application counsel, field analysis, laboratory service and others. These services multiply the value of Link-Belt chains, but not the price!

LINK-BELT

cHAINS AND SPROCKETS

LINK-BELT COMPANY, Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants and Warehouses in All Major Industrial Areas and District Sales Offices and Stock-Carrying Distributors in All Principal Cities. Export Office, New York 7; Australia, Marrickville (Sydney); Brazil, Sao Paulo; Canada, Scarboro (Toronto 13); South Africa, Springs; Switzerland, Geneva. Representatives Throughout the World.
CORNELL COUNTRYMAN

May, 1963
IN THIS ISSUE

Cornell and the Big Walk ............................................. 1
Spring Day Without Coeds? .......................................... 2
At the Governor's Invitation .......................................... 4
Why I'm Joining the Peace Corps ................................... 6
Alumni Page .................................................................... 8
Countryman Capsules ....................................................... 11
Far, Far Above Cayuga’s Waters ..................................... 11
Cornell’s Contagious Spirit Reaches Honduras ................. 12

The Cornell Countryman is published monthly from October through May by the New York State College of Agriculture, 490 Roberts Hall, Cornell University, Ithaca, New York. Second-class postage paid at Ithaca, New York. Printing by Norton Printing Co. of Ithaca. Subscription rate is $1.75 a year or two years for $3.25; three years for $4.50; single copies, 25 cents. A member of Agriculture College Magazines Associated. Represented for national advertising by Littell-Murray-Barnhill, Inc., 369 Lexington Avenue, New York 17, N.Y.

Cover: Mothers and dads will gather on the campus June 10 to watch 294 sons and daughters (a record 51 daughters) receive their Cornell Bachelor of Science degrees with majors in agriculture.

(Drawing: Courtesy of Alumni News.)
Cornell and the Big Walk
by Gary Zien, '64

Unlike other fads such as the Davy Crockett craze, the hula hoop, and the human sardines packed into Volkswagens and telephone booths, the 50-mile walk has strong support from Washington, D.C. Having unearthed some of Teddy Roosevelt's records, President Kennedy wondered if today's Marine Corps officers could walk 50 miles in less than 20 hours, as Teddy had required his officers to do.

Before long, everyone in the country was taking to their maps, locating a place some 50 miles down the road and starting out. Many of the greenhorns began with no idea of how hard this walk would be; and were rewarded with aching limbs and blistered feet. Some were rewarded by finding themselves mentioned in the press; a goal which seems to be set by everyone who attempts the Walk.

Anyone can walk the 50 miles. As heart specialist Dr. Paul Dudley White told a LIFE magazine reporter, "Walking is easier than bike-riding, snow-shoveling and skiing. You don't need a lot of special apparatus. Just shoe leather and good feet." Attorney General Robert Kennedy kept pace with the fad when he completed his 50-mile walk in less than 18 hours. As some political experts observed, "At least in one way JFK has the country moving again."

To be sure, Cornellians aren't making the headlines, but they can be proud of their walking feats. Although they don't walk the full 50 miles all at once, they put a good share of it into a week! The Cornell student has the advantage of geographical variety over his fellow hikers; he has the most diversified terrain and the most inclement weather one could ask for.

At Cornell no one has to worry about not being physically fit. As one coed said, "Who has time for a physical fitness program? I don't even have time to get to my classes." She was referring to four classes that she has three mornings a week, and she estimated that she had to walk almost three miles each day. Her day started in Warren Hall at eight-o'clock. Then there was a nine-o'clock in Lincoln, a 10-o'clock in Stocking Hall, and just before her return to the dorm for lunch, she attends an 11-o'clock class in Olin Hall. All the walking is done in less than 40 minutes.

"It wouldn't be so bad if we didn't have to worry about getting splashed by passing cars as we cross Triphammer Bridge, or plow our own way through new-fallen snow when going to an eight o'clock class," added another student. Our walks also have such interesting features as icy sidewalks and muddy detours around new construction.

A student who lives less than a mile from campus, and who cannot park on Kite Hill, reported that he had to walk almost a mile before reaching lower campus, and he still had 15 more minutes of fast walking to his class in Morrison Hall. And all uphill!

The commuting student has his own problem; crossing Alumni Field from Kite Hill to Tower Road. In the fall and spring the rains make a mire out of the paths across the field. As soon as a student steps from the parking lot and starts across the field he is ankle-deep in water. If he is unfortunate his foot becomes stuck in the mire. If he finally succeeds in yanking his foot loose he usually falls face down in the murky soup. Only when he has reached the warm classroom does he realize he has lost his shoes. Winter and cold weather also challenge the commuting student. There is never a plowed path across the field when it snows, and a student has to be content with wading through waist-high drifts.

Cornellians do all this running and walking without the incentive of seeing their names in the news. But those who still want to climb on the bandwagon and walk 50 miles, can make their trips a little more interesting. Teddy Roosevelt liked to take a bee-line hike. This hike requires the ability to use a map and compass. Roosevelt would pick two points on a map, draw a straight line between them, take a reading on the compass, and begin his walk. Since his line didn't follow any roads or highways, he would stop from time to time to make another compass reading to be sure he was still on course.

Cornell students have an excellent area in which to experiment with the bee-line hike. A line could be drawn to include both gorges on campus and some of the other interesting terrain. Of course, you would need some climbing gear to get in and out of the gorges.

Oh, don't forget, before you start out on any of these physical fitness walks, be sure to notify your local newspapers and have plenty of LIFE photographers on hand, to insure that your walk will be well worth while.
Spring Weekend Without Coeds?
by Martin Walzer, '63

It's not like the old days, and you coeds should be glad. Ithaca, with all its rain and snow, has never missed a Spring, and with its arrival we all know young men's thoughts turn to fancy, but not until sometime in the 1920's did their plans for merrymaking bear much relationship to the coeds. Spring was Spring, but coeds weren't girls, or so said the Cornell male. How sincerely he meant this is questionable, but on the surface this thing called coeducation was only quietly tolerated, and the "imports" dominated the annual Spring Day.

Spring Day! (May 11 this year.) Ah, there comes the old nostalgic look on Alumni faces. Spring Day. Not just that picture in the Ivy Room of the first Spring Day. Remember the bullfight, the duck race, the waiter's race, the Big Top, the Navy Ball, and the crew races? What's happened to it all, and who let all these coeds into the fraternity parties? It's about time you students found out how to really have a time.

Cornell's annual Spring Day originated shortly after the turn of the century. From the beginning, the day centered around the athletic events of the afternoon, for its main reason for being was to help rescue the Athletic Association from financial straits. It quickly became an outdoor affair, and was advertised by a splendid parade in the morning, complete with the floats. Since a great deal of support for athletics came from the townspeople, the parade marched over the cobblestone streets downtown and then wound its way through the campus. Late morning brought a three ring circus with side shows and "wild animals," then a baseball game, and, as the sun dropped westward, the Cornell shells glided northward on Cayuga's waters. Over the years the circus scene shifted between the Quadrangle, Library Slope, Beebe Lake, and the Sage lawn (better known as the Engineering School).

For the coeds, times were a little more difficult. There seemed to be mixed feelings among the girls on campus. Some were bitterly opposed to the cold treatment given them, and campaigned vigorously for the improvement of their lot. Not invited to the Junior Prom, they sponsored an anti-Junior Prom, and returned the men's frowns with snubs of their own. Some, however seemed to find everything they wanted at Cornell, and, although still ostracized from the fraternities, they frequently entertained callers at Sage on Sunday afternoons and at the Sage dances.

Times were gay though too, and perhaps the first really momentous Spring Day came in 1905, when the festivities centered around a bullfight with genuine "imported bullfighters." The bullfighters (genuine Mexican students) impressively entered the arena which had been constructed on the Sage lawn, and solemnly fought the bull, which was actually a baby carriage in disguise. The matadors were well accepted and the fight was undoubtedly a success, but the repercussions were the most astounding of all. Due to the cleverness (?) of an Ithaca reporter a special dispatch reached the Philadelphia Press:

"The 3000 students of Cornell University were treated to a genuine bullfight. There can be no question as to its genuineness, for there was plenty of blood, at the sight of which women students fainted and had to be carried away. Three bulls were killed, and Josef Antonio Oster, a noted matador from Osaluama, Vera Cruz, Mexico, was unhorsed and narrowly escaped being gored . . ." (Reprinted in the Cornell Daily Sun)
The bulls, the Press said, were a special product of the Agriculture College, and had been specially fed to be ferocious. So that all the students could see the horrible spectacle, President Schurman had closed classes for the day. For a week the University heard reprimands from humane societies and indignant readers all over the East.

Spring Day continued, without the bullfights, and remained centered around the athletic events. Only the First World War finally caused it to be discontinued. But too many people had grown attached to the Spring Day tradition for its complete disappearance, and its revival was assured in the post-war years. Unfortunately its revival did not seem to have the same ring to it, but its new character seemed quite pleasing to the students of the 1920's.

In 1928 the circus took the form of a Roman Carnival. Nero presided, chariots squeaked and, as those who were about to die saluted, the battles roared in Schoellkopf.

On the quieter side, the Navy Ball, a traditional part of the celebrations, was held in the Armory. Three orchestras played and some 700 couples attended. For the coeds, things seemed to be looking up. Anti-coedism was on its way out, and, although still excluded from some of the fraternities, callers at Sage and Prudence Risley became more numerous. In 1931, the Cornellian put the pictures of the coeds among the men's rather than at their traditional place among the advertisements in the back.

The popularity of Spring Day seemed to take a dip about the same time our economy did. By 1933 things looked like the last of Spring Day may have been seen, but due to the efforts of a small committee who remembered fondly the days of the past, Spring Day remained on the calendar. It was the novel idea of this committee to hold Spring Day on the island in Beebe Lake, and feature a number of aquatic events such as canoe tilts, the Widows-Sun regatta, and the Harry N. Gordon Trophy Duck Race.

The Second World War marked the transition between Spring Day and what we know as Spring Weekend. Due primarily to the growing size of the student body, the weekend lost its centralized University character and became the more modern house-party weekend. The Student Government must decide upon the date of the weekend on its own since the athletic calendar is now set almost two years in advance. Yet it is actually the faculty each year that decides whether we will have such a weekend.

As for the sore-oppressed coed, whose history has been one of endless struggle, they are now lavished with more privileges than ever before. One begins to ask if perhaps the pendulum has begun to swing to the other extreme. Is the day far off when the sorority sisters start to frown on the girl who dates a Cornellian?
At the Governor's Invitation

Members of the College of Agriculture faculty presented the story of New York's Changing and Adjusting Agriculture in Albany on March 26. These pictures were made during and following the 1½-hour presentation before legislators, other state officials, and farm leaders. On April 19, a similar program was presented before the Cornell University Board of Trustees.

The program and participants.

Introduction: Governor Nelson Rockefeller

Today Compared with 20 Years Ago
Population and Land: C. W. Hedlund, Head
Agricultural Economics Department
Minimum Farm Commodities: W. C. Kennedy
Director of Research
Examples of How Research and Extension Affect New York Agriculture
Apples: Producer to Consumer
John Einset, Head Pomology Department (Geneva)
Robert Smock: Professor of Pomology
Max Brunk: Professor of Marketing
The Work of a Specialist
Regional Agent: Robert Bunker
Regional Agent
Rural Development in Broome County: Bruce Wilkins
Associate County Agent
Communicating Research Results: W. B. Ward, Head Extension Teaching and Information Department
Looking to the Future: A. A. Johnson
Director of Extension
What's Ahead in Market Outlets for New York State Farmers in the Next Decade?
K. L. Robinson, Professor Agricultural Economics Department
Summary: The College of Agriculture's Responsibilities in Research, Resident Instruction, Extension
Charles E. Palm
Dean of Agriculture

Dean Charles E. Palm tells the Governor that the packet of supplementary materials he has under his arm fills in the complete story.

President Malott (left) and Tompkins County's own Assemblywoman, Mrs. Connie Cook, converses with Agricultural Commissioner Don Wickham (right) while Joe King (rear left) passes his comments on to Director K. L. Turk.

Prof. G. W. Hedlund's comments on the economic future for agriculture in the Empire State must be favorable as evidenced by the smiles on the faces of the Governor and Prof. W. B. Ward (center).

Director A. A. Johnson moderates the presentation while Prof. E. S. Phillips handles the visuals.
Our gasoline isn’t good enough for some people...us

We like to think that American Oil products are the best you can buy. And they are. We also like to think we can improve the quality of our products without increasing the cost to the consumer. And we do. Consistently.

A considerable amount of work is done in testing catalysts and searching for those which will help produce the types of gasoline our customers want at the price they can afford.

One of the people engaged in the research and development of our manufacturing processes is John Mitchell, 24, a graduate Chemical Engineer from the University of Texas.

The opportunities for bright young scientists like John Mitchell are virtually unlimited at American Oil. American Oil offers a wide range of new research opportunities for: Chemists—analytical, electrochemical, physical, and organic; Engineers—chemical, mechanical, and metallurgical; Masters in Business Administration with an engineering (preferably chemical) or science background; Mathematicians; Physicists.

For complete information about interesting careers in the Research and Development Department, write: J. H. Strange, American Oil Company, P. O. Box 431, Whiting, Indiana.

IN ADDITION TO FAR-REACHING PROGRAMS INVOLVING FUELS, LUBRICANTS AND PETROCHEMICALS, AMERICAN OIL AND ITS AFFILIATE, AMOCO CHEMICALS, ARE ENGAGED IN SUCH DIVERSIFIED RESEARCH AND DEVELOPMENT PROJECTS AS:

Organic ions under electron impact • Radiation-induced reactions • Physicochemical nature of catalysts • Fuel cells • Novel separations by gas chromatography • Application of computers to complex technical problems • Synthesis and potential applications for aromatic acids • Combustion phenomena • Design and economics: new uses for present products, new products, new processes • Corrosion mechanisms • Development of new types of surface coatings.

AMERICAN OIL COMPANY
Why I’m Joining the Peace Corps

Imagine me teaching a Peruvian farmer how to grow corn, or a Nigerian high school student how to speak English, or maybe even setting up a model dairy in a Pakistani village?

These ideas didn’t quite mesh with what I had always thought I’d like to do when I finished college. But this year, my thoughts changed, and I decided to apply for a two-year appointment in the Peace Corps after graduation this June. I think my decision was sound because of the unique opportunities for me as a Peace Corps volunteer.

The chance to travel and live in foreign countries for extended periods of time was the most appealing aspect of Peace Corps Service to me. And since Peace Corps volunteers are invited by the host country, my stay would not be that of a tourist, but more of a welcome guest. I would become fluent in another language, and gain several years practice in speaking.

But more than just travelling abroad will be possible by joining the Peace Corps, for I will be given a job based on my abilities and training. As an agricultural economics major, I will be able to offer my education to countries which can really use trained people. And for me, this will be an excellent opportunity to see just how applicable my total education is in the field.

In addition to travelling and doing something with my education, I think now is a good time to get away from the campus. I had always planned to go to graduate school immediately after college. However, I realize there are many good things in life that one cannot pursue while in the midst of the academic world; I would like to have time to look back at my education and at myself. Also, I hope to spend part of the next two years deciding what I’ll do next—graduate school, or professional training, or perhaps even the army or navy. That’s another thing. Peace Corps Volunteers are deferred from the draft, and if I do continue my education later, I’ll stand a good chance of avoiding the peace time military—if I so choose.

Financially, the Peace Corps is a good deal. Besides receiving an adequate living allowance, I’ll be accumulating $75 a month which will be paid when I complete my assignment. That will total $1800 in forced savings after two years, and I doubt that any of my friends who take jobs immediately after graduation will save as much.

If all these opportunities for service and travel without undue economic hardship didn’t make the Peace Corps work attractive enough, the picture is getting better. Plans are currently being made to set up an office in Washington, D. C. to place Peace Corps people in graduate schools upon completion of their two year assignments. Cornell has announced the establishment of two special graduate fellowships for Peace Corps Volunteers. All this is recognition of the fact that students who have lived and worked in foreign countries will bring to their graduate training an experience and maturity not usually found in college graduates. Academically, the Peace Corps may end up to be a convenient stepping stone for me.

I have refrained from mentioning the altruistic aspects of Peace Corps service, for they are of a more personal nature and are harder to discuss. I believe part of my motivation for joining the Peace Corps is idealistic and altruistic however rather than sermonizing, I would rather point out that from every other point of view—travelling, using my education, and furthering my knowledge, the Peace Corps seems to me an ideal way to spend my next two years.

Donald Ferguson (center), stationed in Ibadan, Nigeria with the Peace Corps, is managing the dairy of a large plantation owned by the western region school of agriculture. He is a ’54 Cornell graduate in animal husbandry.

Beside working as educational aides to Filipino public school teachers, Peace Corps Volunteers in the Philippines do much of their own housekeeping and house-cleaning. At their backyard garden in Lihon town, Albay, Brit Horner (left) sweeps away the trash as Bernice Koffler waters the plants. Miss Horner, a 22-year-old graduate of the New York State College of Home Economics at Cornell, majored in child development. She has knowledge of French and speaks and writes Spanish.
Fifteen of PCV’s from Cornell are listed as having an agricultural skill or home economics training. Ten of these are degree holders. They are:

- Joseph W. Adams—DVM ‘61—Nigeria
- Frank E. Brockman—B.S. in agriculture ‘61—Nigeria
- Mary L. Brown—B.S. in animal husbandry ’54—Ecuador
- Lawrence Michael Cassidy—B.S. in agric. ’62—Nigeria
- Donald S. Ferguson—B.S. in animal husbandry ’54—Nigeria
- Judith B. Gilvary—B.S. in home economics—Brazil
- Arlene H. Goodyear—B.S. in home economics ’52—Nigeria
- Clarinda Brit Horner—B.S. in home ec. ’61—Philippines
- John Huxtable—B.S. in agriculture ’61—Iran
- Grant D. Wells—B.S. in agric. eng.—Pakistan

PCV’s who attended Cornell but who did not receive a degree:

- David Knoll—two years—Brazil
- James Landmesser—three years in ag. eng.—W. Pakistan
- Justin McLoughlin—one year—India
- Sue Sadow—one summer—Sierra Leone
- John Paul Snyder—India

Florence McCarthy teaches an extension class in East Pakistan.

Merlin Skrevedt, with apprentices from St. Lucia Agricultural Department, checks the egg output of the geese sent from America via Heifer Project, Inc. for distribution in St. Lucia.
President Robinson, members of the Alumni Association, honored guests and friends:

We always look forward to this pleasant occasion and appreciate your invitation to join us. We are pleased that so many of you came to our program of leadership training in Rural Resources Development.

I want to express my thanks, and those of the faculty, for your continuing interest, support, and effective work in behalf of our student recruitment program. Likewise, I would pay sincere tribute to Director Watkins and his associates in Resident Instruction for their work with you. Together you have played an important role in our achievement, for the second straight year, of having the largest undergraduate enrollment among the land-grant colleges of agriculture in the United States, with a total of 1920 students in the fall semester. In addition, we had 725 graduate students in the various departments of the College. We are pleased with the interest now being expressed by many qualified candidates for admission in the fall of '63. The vast array of opportunities in modern agriculture for a liberal education with training in a variety of specializations, attracts qualified, capable young men and women. The areas of the biological sciences and agricultural business provide opportunities for special growth.

Many friends have been good to us and have helped immeasurably on problems relating to the work of the college. Advisory groups and committees have worked with us during the year. While they are too numerous to mention individually, I do want to express our sincere thanks to them.

Since our last meeting, Director M. C. Bond retired as Director of Extension and Director A. A. Johnson was appointed to this important position. We are glad that the new Director is willing to undertake his broad assignment at a time when the adjustments in agriculture continue at an increasing tempo, and when the structure of our organization needed to be reviewed in light of present and future demands for service. I am happy to report that Director Johnson, together with Associate Directors Durfee and Harrington, Assistant Director Caulum, the State leaders in agriculture, and the 4-H Club are working with the specialists and field staff to provide strong leadership in extension programs. Changes have been made; others will be made, to continue extension's vital role in the future of the broad interests of modern agriculture.

With the increased production made possible through better technology, increasing acres of New York farmlands continue to be withdrawn from production. The story as Howard Conklin put it this morning is that compared with 1900, we have today ½ as many farms producing ½ more products on ⅔ the land. This is vivid testimony of our present dynamic farm production in the Empire State. With the withdrawal of more than 10 million acres from farming since the turn of the century, and other cropland yet to be removed from production, we feel that we have both the responsibility and the ability to join with other qualified groups to develop new uses for some of the acres no longer needed, or profitable, for agricultural production. Our Agricultural Leaders' Forum today is dealing with this important subject: Rural Resources Development in New York State. Distinguished leaders in other areas than agriculture are with us to discuss this important topic, and hopefully to stimulate our thinking about the best approach to the full development of New York's total rural resources, including their use for agriculture, forestry, conservation, water resources, industrial development, rural non-farm living, and other uses.

The Advisory Council for the College and its Experiment Stations, along with those for the other schools and colleges of the university, was revised by the Board of Trustees last July 1. We now have a maximum of 25 members appointed by the Board, with Morton Adams providing capable leadership as chairman. This Council is assisting us in the development of policy and programs which we all trust will be meaningful for the best interests of commercial agriculture and all other groups served by our two institutions. The spring meeting of the Council is planned for the Geneva campus where Director Barton and his faculty will present a strong program dealing with the procedures they use in bringing all of their resources to bear on the solution of practical problems facing the fruit and vegetable processing industry. The
Station continues to be a fine, productive part of the College, and, in turn, of Cornell University.

No review of contemporary events would be complete without mention of the budget situation. Unfortunately, we are not far enough along this year, as you well know from the newspapers and other media of communication, to know where we will stand for fiscal ’63-’64. I can say, however, that the Governor’s budget did provide good support, including planning money for the new agronomy building, and for the new entomology-plant pathology building at Geneva, as well as for the second phase of our growth chamber, greenhouse and associated laboratory project. The Agronomy Advisory Council deserves special mention for its assistance to us, and on our behalf. Naturally we hope that when the budget is passed, we will still have authorization for these important physical assets needed to do the job ahead of us.

You will recall the revision that was made in our high school youth programs which have been in operation, under faculty direction and supervision, during recent years. It is gratifying to note that next week we will be host to 3000 selected high school youths, interested in the natural sciences, from 150 high schools around the state. Regrettably, 2000 more who applied could not be accommodated. Also here at the same time will be the agricultural science program, covering 2000 selected youth from vocational agriculture programs in nearly 200 high schools over the state. We are grateful to our faculty who plan and direct these important activities, and to co-operators in some of the other schools and colleges of the university. Professors Lathwell of Agronomy and Bail of Rural Education are the program leaders this year.

I am confident that you will be as interested and pleased as I am that President-elect Perkins called to arrange for a visit with us in the College of Agriculture when he is on campus next Saturday morning. Provost Atwood arranged for him to have three hours with us to get better acquainted with our program and its operation. We have had the opportunity to meet him briefly during two previous visits to Cornell, and I am delighted that he is coming to see us at the college this week. He certainly has shown a genuine interest in our welfare and all of us look forward to working with him.

In closing I would like to pay tribute to the excellent work of our faculty. As teachers, and their participation in programs of research and extension, they are the best to be found anywhere. Speaking in their behalf as well as for the college administration, may I say we are justly proud of our alumni and our students. We shall do our best to maintain the high standards and achievement goals which you have set for your College of Agriculture.

Looking for the finest in print?

You’ll find it at—

Norton Printing Co.
317 E. State St.
Ithaca AR 2-7800

"Printers of the Cornell Countryman"

For Spring Weekend
Buy Your Date a Cornell Item...

• BANNERS & PENNANTS
• MUGS & STEINS
• SWEATSHIRTS
• T-SHIRTS
• JEWELRY
• CHARMS
• GLASSWARE

Don’t Forget to Buy Film

Cornell Campus Store
Barnes Hall
Our Placement Office annually receives about six times as many requests for home economists as there are graduates to fill the jobs. Nationwide, the demand for professionally trained home economists at all levels far exceeds the supply.

Graduates start work as home economics teachers in secondary schools; nursery school and kindergarten teachers; Cooperative Extension Service home economists; workers in food and product testing and promotion for manufacturers; dietitians for business firms, educational institutions, hospitals; home service representatives for utility companies; executive trainees in department stores; junior case workers (or case aides) in social welfare programs; program directors for group work in youth organizations; recreation leaders in hospital and rehabilitation programs for children and homemakers; and editorial assistants and product testers for magazines.

Graduate assistantships that combine work with post graduate study are available in this College and in other schools and colleges of home economics throughout the country.

Helen G. Canoyer, Dean
Far, Far Above Cayuga’s Waters
by Mary Anne Grieve

Robert H. Grieg of Red Hook, prominent Dutchess County farmer, was elected president of the Alumni Association of the College of Agriculture at the group’s annual meeting. He succeeds Donald G. Robinson of Castile.

Vice presidents are Donald C. Whitman, Adams; Robert Ev-errit, Schenectady; and Francis Sears, Cortland. Stanley W. War-ren, professor of farm management at the College of Agriculture, was re-elected secretary-treasurer. Robinson, Russell Cary of Morrisville, and Nelson F. Hopper of Latham were named to the executive committee.

“Direct from tree to customer” is the way apples may be purchased in the future, according to Prof. Max E. Brunk, Cornell marketing specialist. Several New York State growers are cooperating with Brunk and Anthony C. Cunningham, graduate assistant, in research to provide consumers with better quality apples, while reducing marketing costs. As apples are picked in the orchard, they are placed directly in cartons in which they are sold in the stores.

The annual New York State Poultrymen’s Get-Together will be held at Cornell on July 10-11. Prof. Charles E. Ostrander, poultry dept., is chairman.

Prof. Robert H. Dalton, College of Home Economics, is directing a study of the effect of multiple mothering on child personality in the Virgin Islands. The study covers a demographic survey of the island of St. Thomas to determine the percent of children living with someone other than the natural mother. Indications are that this may run as high as 33 percent, since the practice of giving away youngsters from birth to around 11 or 12 years of age is fairly common.

“Far Above Cayuga’s Waters” flies one of Cornell’s most unique gifts—the university plane. It lands bringing a group of hotel students back from a Chicago conference, refuels, and takes off for Annapolis with the Cornell wrestling squad. The next day it might carry President Malott to Idlewine Airport in New York and return with a prominent lecturer, or take a faculty group from the Colleges of Agriculture and Home Economics to Washington to meet with members of other land-grant institutions.

The executive-type DC-3 was donated by Mr. Leroy R. Grumman ‘16, a loyal and generous alumnus and trustee, who is well-known as the donor of Grumman Hall, the Aerospace engineering building. The plane was formerly owned by the Grumman Aircraft Engineering Corporation of Bethpage, Long Island, for use by the company’s executive staff.

Mr. Grumman was aware of the lack of adequate transportation facilities, saw the need for a plane, and offered us one of his. Since its delivery in February 1961, the plane has provided the university administration, faculty, staff, and students with an efficient and comfortable means of traveling.

Ben Williams, assistant to President Malott and the person in charge of the plane, emphasizes another of its values. “Since it is operated by the University,” he explains, “the plane enables us to have noted personalities come to the campus who, because of business or social obligations, could not otherwise arrange their calendars to fit the schedules of commercial aircraft.”

Busy government officials such as U. S. Senator Barry Goldwater and Director of the Budget, David Bell, made their trips to Ithaca via the plane. As Mr. Williams says, “Having this service to offer is certainly an inducement when inviting dignitaries to the university.”

Although the plane’s services are available to numerous university groups, it is used primarily by the President of the University and the executive staff. Because of its size and its limited air-speed (about 160 miles per hour), the plane is not suited to long-distance travel. The most frequent trip made is that between Ithaca and New York.

Mohawk Airlines was contracted in January, 1961, to operate the plane for the university. The airline supplies a pilot and co-pilot for each flight and provides the maintenance necessary to keep the plane in air worthy condition.
Cornell's Contagious Spirit

by Joan Rasmussen, '63

Joe Robinson, a Cornell junior, teaches a Santa Rican how to read and write.

June 11, 1963 holds a special meaning for the 40 Cornell students leaving for Honduras. It is the beginning of a contribution to better international understanding, which is the primary purpose for going to Honduras. It is the expansion of Cornell's Honduras Project from one team in 1961 to five teams this summer.

For three years Honduras has been selected for the study-work seminar largely because it is a country of "seventy percents." The population is seventy-percent illiterate, seventy percent of the people die of diseases that are curable or preventable, and seventy percent do subsistence farming usually on steep mountainsides. In Honduras, a young Protestant missionary who graduated from Cornell, helped Cornell United Religious Work to select Honduras.

The teams have been invited at the joint invitation of the Rotary Clubs in cities near the villages and by the leadership in the villages themselves. Interfaith, bilingual, coeducational teams, including a team leader, will be located in each of the following villages of the Republic of Honduras: Quimistan, Trinidad, and Santa Rita, each within 50 minutes drive southwest of San Pedro Sula near the Guatemalan border, Ojojona, a 40 minute drive south of the capital city of Tegucigalpa, and El Progresso, in the Republic of Guatemalan.

"We will live, work, and talk with the people in the villages for eight weeks," says The Reverend L. Paul Jaquith, Director of "Cornell in Honduras." Although the project will be contingent on what needs Hondurans express when the team arrives, certain projects are anticipated. Cornell students are being prepared to offer more than just the desire to work.

The students, who applied for "Cornell in Honduras" through Cornell United Religious Work last November, have completed their freshman year and have had a minimum of one semester of Spanish or its equivalent. Through interviews with Mr. Jaquith and former team members, the students were chosen in December 1962 so that preparation for the project could begin in January 1963. The students pay $230 for the cost of the program, including round trip transportation by air, food, inoculation and medical expenses, and insurance and travel while in Honduras.

They prepare for the project by doing research in their major field of study in relation to a phase of Honduran life. They participate in a series of seminars during the spring semester to provide basic knowledge of Latin America and Honduras. In addition, they take minimal training in skills required for work in Honduras.

A new area of training is in the field of agriculture because of the problems Hondurans have with their rural farm practices on steep mountainsides. Hondurans are accustomed to growing one type of white corn only. They have one tool, a machete, to control the fast weed growth. There is not much effort to clear rocks and branches off the hills either. Government agencies in the capital city of Tegucigalpa write material on better farming methods, but because about 90 percent of adults in the rural areas are illiterate, they cannot understand the information.

The Cornell team will be prepared to meet the Honduran farm situation. A training program in agriculture has been formed with the cooperation of the New York State College of Agriculture to find new crops to introduce to Honduran farmers. Hybrid seeds, crop rotation, and new vegetables, like tomatoes and squash, are being investigated. The team is enthusiastic about introducing new crops, since a man in Guatemala grew a new variety of corn last year and some Hondurans believed it was better than their traditional white corn. If he can prove it to the people so might the Cornell team this summer.

The information obtained from the New York State College of Agriculture will be useful only if it can be interpreted for the illiterate population. "Cornell in Honduras" will work under the STICA program (Servicio Tecnico International Cooperativa Agricultura). STICA is a Honduran organization supported jointly by the U.S. AID and the Honduran government. The Cornell team will assist STICA representatives in interpreting new farm practices to the people since STICA representatives have already identified themselves with the people.

These agrarian reforms will be more successful if there is a parallel reform in the field of nutrition. Since Honduras has no food processing or refrigeration, the rural people depend upon what
Reaches Honduras

Alice Micknim, a Cornell student, is playing the guitar for some villagers in Santa Rita. On the wall behind Alice are charts for use in conducting Spanish and English lessons for the people.

Also, last year Doña Sara, a villager, could speak Spanish, but she couldn’t read or write. When the students spoke fluent Spanish words to her, she was easily convinced that she could learn to read and write also.

How are new words taught to the Hondurans? The Cornell team will teach group classes and will utilize the Labaugh Literacy Method, a method using syllables associated with pictures. A literacy expert came to Cornell to teach the teams the method. It is possible to train Hondurans to carry out the program after the team leaves since the theme of the Labaugh Method is “each one teach one.”

The children are not as illiterate as the adults, because about half of them attend public schools from one to four years. Since the children have expressed a strong desire to learn English, classes in “Inglés Basico” are planned also. The syllable method is used because they learn more quickly with this method. By the fourth of July last year, the children were able to read short biographies of Abraham Lincoln and George Washington and to reach the high notes of the Star Spangled Banner.

Part of the project for the schools is constructing desks and blackboards. In one political division in Honduras there are 220 public schools but only 20 of these have any furniture at all.

To further the education of the Honduran children, the Cornell team is instigating a physical training program teaching team sports and group recreation in the elementary schools. It is a new experience for these children to play as team members and by the rules. Honduran culture lacks team spirit and appreciation for the rules of the game, for it is an atmosphere in which it is assumed that everyone looks out for himself.

The Cornell team wants to understand Hondurans, and through them, other Latin American cultures also. They are already trying to anticipate the expression on a person’s face when he reads his first words or when a younger child helps mama with her lessons. The Honduran way of life of making tortillas, raising corn, or discussing the weekly lottery seems familiar from the seminar discussions on campus, but the team will find out for themselves by living with the people what this life is like.

This June, five Cornell teams will begin to live, work, and talk with the people in the country of “seventy percents.” On that day a contagious spirit of faith and friendship will begin to spread throughout the land of Honduras.
For transmitting power...or conveying, nothing does it like Link-Belt chain

For day-in, day-out service, nothing can match Link-Belt chain’s strength and endurance...its positive efficiency...which add to the reliability of farm equipment drives and conveyors.

Today, over 300 farm machine manufacturers obtain this reliability from Link-Belt. Experience has shown them that chain marked with the double-arrow > < trademark is made to high standards...has consistent quality and pitch uniformity...will maintain rated performance and efficiency on their machines.

Link-Belt offers industry’s most complete line of drive and conveyor chains, chain attachments and sprockets. Also “bonus” services that aid the designer, improve the design: application counsel, field analysis, laboratory service and others. These services multiply the value of Link-Belt chains, but not the price!

LINK-BELT
CHAINS AND SPROCKETS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry, There Are Link-Belt Plants and Warehouses in All Major Industrial Areas and District Sales Offices and Stock-Carrying Distributors in All Principal Cities. Export Office: New York 2, New York, 5, Australia, Mariekville (Sydney), Brazil, Sao Paulo; Canada, Scarboro (Toronto 13); South Africa, Springs; Switzerland, Geneva. Representatives Throughout the World.
• International Agriculture
• Cornell’s Rah Rah Days
• Flying Professors
• The Dean Speaks
• Financial Aid

• Alumni Notes
• Countryman Capsules
Approaching its 60th year of service to students, faculty, and alumni, the Cornell Countryman is about to embark on a new experiment in magazine production. Beginning with the November issue, the magazine will be written and produced by students specializing in agricultural journalism. The students will receive practice credits for their work, and will be under the guidance of members of the Department of Extension Teaching and Information.

Through this new arrangement, the students will receive valuable practical experience in presenting interesting articles, valuable information, and an otherwise attractive magazine.

These are the students who will be writing and editing your Countryman this year:

- **Freshmen**: Brenda J. Corlett and Donald G. Semmler.
- **Seniors**: James J. Brodell, and Richard A. Heinrich.
- **Adult Special**: Chester B. Bartels.

The Cornell Countryman is published monthly from October through May by the New York State College of Agriculture, 490 Roberts Hall, Cornell University, Ithaca, New York. Second-class postage paid at Ithaca, New York. Printing by Norton Printing Co. of Ithaca. Subscription rate is $1.75 a year or two years for $3.25; three years for $4.50; single copies, 25 cents. A member of Agriculture College Magazines Associated. Represented for national advertising by Littell-Murray-Barnhill, Inc., 169 Lexington Avenue, New York 1, N.Y.
WHO DOES THE THINKING FOR THINKING MACHINES?

Even though we didn't invent it, we at American Oil use the computer so extensively in Linear Programming that we often think of it as "our baby." And as such it must be spoon-fed known data by experts in order to come up with the answers to a myriad of refinery operation problems.

One of the experts at American Oil who helps the thinking machine think is Leonard Tenner, 24, a graduate Chemical Engineer from M.I.T. His current assignment: prepare a mathematical model covering the manufacture of gasoline, home fuel and jet fuel from crude oil.

The fact that many gifted and earnest young men like Len Tenner are finding challenging careers at American Oil could have special meaning for you. American Oil offers a wide range of new research opportunities for: Chemists—analytical, electrochemical, physical, and organic; Engineers—chemical, mechanical, and metallurgical; Masters in Business Administration with an engineering (preferably chemical) or science background; Mathematicians; Physicists.

For complete information about interesting careers in the Research and Development Department, write: J. H. Strange, American Oil Company, P. O. Box 431, Whiting, Indiana.

The College’s Responsibilities
---Today and Tomorrow

by Charles E. Palm, Dean

The challenges of a changing agriculture come with increasing tempo. Looking ahead and planning for these challenges can be the key to the future strength of agriculture in the Empire State. For more than 75 years the College of Agriculture has been close to the people of New York State. Many of the farmer institutes of the late 1800’s provided the initial contacts for farm and rural people to exchange ideas with professors from Cornell, and to recognize that education offered a positive approach to the solution of some of their problems. With the development of agricultural research at the New York State Agricultural Experiment Station at Geneva, and the Cornell University Agricultural Experiment Station at Ithaca, closer teamwork developed between growers, their College, and the experiment stations.

The State government has responded generously to requests for support of research, teaching, and extension. Thus today the College has grown to a position of prominence in agriculture and maintains these same relationships with the people of our state and nation, as well as sharing in the broadening field of world agriculture. The landgrant philosophy of service to the people has always characterized our activities.

As the years go by, agriculture becomes more specialized. The commercial farm, important as it is in food production, must be supported by industries and agencies that provide inputs essential to a successful farm operation. Similarly, there are many businesses and services required to take raw products through processing, marketing and distribution channels, ultimately to the consumer. We in the College are delighted to serve, through our various programs, all of the segments of this dynamic industry which utilizes about one-third of the gainfully employed people of the United States.

The Cooperative Extension Service operates in 56 counties of the State. Each County Extension Association is supported by County, State, and Federal appropriations, as well as membership fees. Our College works closely with the Extension field staff in conducting educational programs. The Extension Service provides leadership not only for commercial agriculture but also for people interested in rural non-farm and urban activities.

An encouraging trend in the support of College programs is the increased financial participation of cooperators. In 1951-52, the College of Agriculture received 81 percent of its support for research from State and income funds. Ten years later (in 1961-62) with a research budget that had more than doubled, support from State and income sources amounted to 62 percent of the total, and support from other sources had increased to nearly 38 percent.

This partnership approach to research is good. With basic support from the State, we can make excellent use of grants and other short-term allocations. Matching funds for physical facilities give the State another opportunity to extend its resources.

Our newest dimension of activity—international agricultural development—permits us to share our experiences and abilities with other lands, and, in turn, to benefit from our contacts with them. Not only are foreign students on campus with us, but our own students and faculty are working abroad in many aspects of world agriculture. The College this fall started a new program for undergraduates in international agriculture; and for the first time it is possible for graduate students to minor in international agricultural development. We anticipate continuing important developments in world agriculture which will receive their major financial support from private foundations and the federal government, working in cooperation with us.

Agriculture needs its fair share of the most talented of our young men and women. In the training of future leaders, the college plays an important role. Among the 68 landgrant universities in America, Cornell University had the largest undergraduate agricultural enrollment for the past two years (1,920 undergraduates in 1962-63). In addition there were 725 graduate students. About 300 students from other lands—more than a third of the University’s total foreign student enrollment—were among our students in agriculture.

The national trend of enrollment among colleges of agriculture declined over the past decade, yet our own held fairly steady and then increased.

Continued growth, based on careful selection of qualified applicants, is the projected pattern through 1970 which has been approved by Cornell University and the State University of New York.
For transmitting power...or conveying, nothing does it like Link-Belt chain

For day-in, day-out service, nothing can match Link-Belt chain's strength and endurance...its positive efficiency...which add to the reliability of farm equipment drives and conveyors.

Today, over 300 farm machine manufacturers obtain this reliability from Link-Belt. Experience has shown them that chain marked with the double-arrow >-< trademark is made to high standards...has consistent quality and pitch uniformity...will maintain rated performance and efficiency on their machines.

Link-Belt offers industry's most complete line of drive and conveyor chains, chain attachments and sprockets. Also "bonus" services that aid the designer, improve the design: application counsel, field analysis, laboratory service and others. These services multiply the value of Link-Belt chains, but not the price!

LINK-BELT
CHAINS AND SPROCKETS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants and Warehouses in All Major Industrial Areas and District Sales Offices and Stock Carrying Distributors in All Principal Cities. Export Office, New York 7: Australia, Marrickville (Sydney); Brazil, Sao Paulo; Canada,Scarboro (Toronto 13); South Africa, Springs; Switzerland, Geneva. Representatives Throughout the World.
Profs Aloft

by C. M. McBride (Grad.)

Many Cornell professors have hobbies and interests which provide a recreational pastime, and for the “Profs Aloft” group the hobby is flying. However, according to Harry A. Kerr, professor of agronomy, it is advantageous to use his flying ability in conjunction with his job.

Professor Kerr is one of seven flying professors in the College of Agriculture who are members of the East Hill Flying Club, which is located at the Tompkins County Airport in Ithaca. He started flying with the club approximately three years ago. Since then he has acquired a private license, which enables him to fly anywhere in the United States.

During his three years of flying, Professor Kerr says there have been many experiences that have proven educational. One experience he related was that of encountering bad weather while on a business trip to Long Island, New York. The weather forecast was good when Professor Kerr, along with Professor C. H. Freeman, associate professor of extension teaching and information, and Elmer Ewing, assistant professor of vegetable crops, took off from Ithaca for the trip. Originally the trio had anticipated returning the same day, but when the business was accomplished and they started back toward Ithaca they noticed the weather was beginning to close in. They had to turn around and head for Westchester Airport, which was to their rear, because none of them had an instrument rating, which is necessary to fly in conditions where visibility is restricted. Professor Freeman, who was piloting the aircraft, was in radio contact with the control tower, and after they finally received clearance to land, theirs was the last plane on the ground before the field was closed to all landings. Professor Kerr commented that this experience proved a basic rule in beginning flying training and that is, “If you cannot dodge bad weather it is better to do a 180-degree turn and return to the point of take-off rather than be caught in the weather.”

Professor Kerr further described another trip which enabled him to attend an evening meeting, an all-day meeting the following day, and return to Ithaca for a meeting that night. The session he referred to was a Soil Conservation Committee hearing at Malone, New York. He was accompanied by a graduate student doing thesis work which involved research with people in the Malone area, and a member of the State Soil Conservation Committee. An outstanding advantage of flying to a meeting of this type, according to Professor Kerr, is the time involved. He stated that in this case, to accommodate all three persons, the trip by automobile would have taken approximately eight hours one way, but by flying the time was cut to one hour and 40 minutes.

The meeting ended at 3:00 p.m. and the group was back in Ithaca by 5:15 the same day, enabling Professor Kerr to attend the scheduled meeting that night. According to Professor Kerr, the saving of time, and the arrival at destination relaxed are the biggest advantages of flying.

The flying professor further stated that flying in his work is good for public relations. Many of the Soil Conservation Committee workers become familiar with their area quicker by an aerial view than by any other method.

The other five members of the club who teach in the College of Agriculture are Willard Croney, extension specialist in agronomy; Arthur Muka, associate professor of entomology; Edward Schano, associate professor of poultry husbandry; Raymond Sheldrake, associate professor of vegetable crops; and Earl Stone, professor of forest soils.

Whether they fly business associates or the family, the members of “Profs Aloft” enjoy their flying immensely.
Another big year on the hill is under way. The usual fall enthusiasm is evident as gung-ho orientation counselors lead puzzled freshmen around campus, and football players put in long days of practice. It's sure to be a better-than-ever year as we find ourselves under the leadership of a new president and on the brink of a centennial celebration. Yet, someone is bound to suggest that the orientation counselors lack spirit, and enthusiasm for football is dead.

After looking through the Sun editorials for the 1926-27 school year (a significant Roaring Twenties year—the Model A appeared, Babe Ruth set home-run records, and my Dad graduated from Cornell) one cannot help but conclude that there was more spirit in the good old days.

The Sophomore Smoker of '27 was an occasion to remember. The sophomores who had annoyed the freshmen at their banquet, were barred by the frosh from the Straight for their smoker. The Sun reported the ensuing scene: "The sophomores charged down upon the unflinching freshmen ranks throwing ammonia, rotten eggs and sundry aged vegetable matter ahead of them . . . nude underclassmen could be seen running blushing from the scene of battle; on all sides lay trousers, coats, shirts, stripped with pitiless glee from struggling victims." Several days later this appeared in a letter from an alumnus: "Losing one's trousers and liking it is a badge of real sportsmanship."

Professor S. R. Shapley '28 remembers the annual mud rush, another aspect of the freshman-sophomore rivalry. Alumni Field was wetted down, a big ball thrown in to create the pretext of a game, and a brawl followed. At the end, the ground was littered with clothes and the boys were coated with mud. The traditional spring rush on the Ithaca theaters also colored the days of the college kids, as did water fights, head shaving and fraternity hazings. Mr. Shapley notes that although there was more roughhousing, it was not usually malicious or destructive.

Although it described spirited scenes of class rivalry, the Sun seemed concerned about the apathy of students too. Even in the Roaring Twenties, college spirit was an issue; the Sun had to prod the freshmen to buy their beanies. "The Passing of the Rah Rah Boy" was the title of this editorial which appeared in the Sun on January 24, 1927: "A feature writer in the New York Times has discovered that the rah, rah, college boy is vanishing. As a matter of fact, he went to a quiet death about ten years ago."

Cornell remnants of the rah, rah spirit were the freshman rules, but the Sun reported that "they are gradually fading away under the cold light of common sense . . . . College students still cheer frenziedly at football games, and snake-dance, and tear down goalposts in the delirium of victory. But they do not accept these as the most important occupations of college life, they tend to place them in the subordinate position where they belong, and devote the major part of their attention to more serious and instructive activities. The student mind has changed entirely. He reads and discusses intelligent books or shows an interest in what is going on in the world, and is not hooded. Everyone is doing it."

The alumnus who watches his old order vanish, is the one who sees apathy in the present students. The low ebb of the Cornell band in '27 was the basis of such criticism. The Sun noted that "Each year witnesses the passing of a Cornell institution. This year it is the band . . . ." An indignant Cornell alumnus wrote "There will never be a Cornell Band that will amount to anything as long as there is lack of undergraduate pride."

Other issues of that year sound incredibly familiar to us today. The old timers had their problems with lack of interest in student council elections, and failing honor codes too. The big difference between the twenties and now lies in the general social customs rather than in the students. For instance, smoking was banned in Goldwin Smith Hall, and bootlegging and drinking were key issues. The Sun warned freshmen against evil spirits and suggested that they were the reason for the 5% dropout at the end of each term. It commented that although all fraternities have rules prohibiting drinking in the houses, "In a great many cases these rules are ignored and set aside . . . those who take advantage of the shelter and protection of the fraternity house are sometimes chronic alcoholics who are not content to sip wine Saturday night but would prefer to start each school day with a good stiff drink. Such is the situation at Cornell."

Students no longer sip ginger ale by potted palm trees or get excited about class rivalry. They tend to look at those goldfish-swallowing contests of yesteryear as "quaint." However, critics who lament the passing of traditions falsely assume that college spirit is passing too. They don't realize that as details change and organizations come and go, the energy and enthusiasm of college students constantly finds new outlets.
Those Educational Expenses...

Part-time Work

by W. Henry Ritchie '64

Finances, unfortunately, must be a major consideration when one thinks of furthering his education. At Cornell this consideration is of utmost importance, with the skyrocketing of costs. Part-time employment is the answer for many students, and fortunately the Office of Scholarships and Financial Aid makes many employment opportunities available.

Under the excellent guidance of Mrs. Olive Snyder, the employment department in the Financial Aid Office is able to place students in jobs according to their desires and capabilities. Long-term student loans and scholarships are also available through this office; however, each has its particular stipulations, and not all students want or qualify for either. Twenty-six percent of the women and 24 percent of the men are employed at one time or another during their four years' stay. Often a student is placed in a job before he enters Cornell. He may be relocated, if after he has begun work he finds the job unattractive.

Many jobs may be found in laboratories, libraries, and dining halls or cafeterias. Library jobs are by far the most popular, and have the longest waiting lists. Unfortunately they require a certain "type" of person and not everyone fits this requirement. The personnel at the library reserve the right to judge whether you are the necessary "type."

The opportunities for women are fewer than those for men; in fact a woman is advised against coming to Cornell unless she can meet her major expenses. Even though there are fewer opportunities for the women, the figures show that they take greater advantage of these opportunities. Each year a few girls are able to secure positions as waitresses in the girls' dormitories; but the turnover in these jobs is very low, and not many positions are available each year. By working 16 hours a week as a Cornell waitress, a girl can earn her full board. Babysitting for Ithaca families is one of the most popular jobs among the women. Some women are desk receptionists in the dormitories, do clerical work for students and professors, or do housework in the Ithaca area. But none of the jobs should be counted on as a major source of support, the employment office warns.

For the Cornell man the picture is somewhat more promising. Samuel Ulbing discovered an interesting job at the High Voltage Laboratory. Sam is a fourth-year electrical engineering student and has been employed at the lab for two academic years and a summer. He is now working on a project under the direction of Professor Joseph Rosson. This project, sponsored by several large power companies, involves testing an underground cable, which at some time will burn up. In the meantime Sam and other students take temperature readings, calculate data, and observe any unusual characteristics of the cable. The students rotate in 8-hour shifts so that there is someone on duty at all times. Sam's enthusiasm for his job was the cause of his staying in Ithaca last summer. In addition to taking the regular readings, he helped to build equipment at the High Voltage Laboratory.

All the University jobs are on a graduated pay scale so that length of time of employment is taken into consideration. At the library, for instance, every 200 hours of work indicates that a raise is due. The average wage varies with the job, but rough estimates are $1.15 per hour for lab work, $1.05 to $1.20 per hour for library work, $1.05 for cafeteria work, and for odd jobs as much as $1.50 per hour.

Robert J. Bonos worked with Professor W. G. Pond of the School of Nutrition on a protein deficiency experiment. He worked with rats and pigs and his duties included everything from cleaning their cages to doing post-mortem analyses. Bob hopes to do research in this field when he graduates.

Repairing tape recorders for the Division of Modern Languages, delivering shoes for a shoe repair shop, driving a pizza wagon for a restaurant owner, cleaning stables, or working in the greenhouse are other possibilities. Josiah Stranberg, Arts '64 prefers oiling old leather books in the Rare Book Room of Olin Library. For 10 hours a week he tabs and plates old books and stacks, pages and reshelves them in the stacks. "When handling the books in the department, which are worth about half of the value of all the books in the library, I have to be pretty careful" is Joe's reaction to his job.

Part-time employment can be not only a source of revenue but a good relief from the pressure of studying. For most students a job can absorb several otherwise-wasted hours every week. Most important, though, it is a means to help finance their education. The possibilities are great, from sitting on tables to feeding minute insects in the entomology department. For anyone who wants to work, it's certain a desirable job can be found through the financial aid office.
How do the increased costs of the colleges of Cornell University affect students? For the Cornellians who are financing all or part of their college education, the increased costs will necessitate financial aid. The Office of Scholarships and Financial Aid in Day Hall is available to all students. In addition to having an advisory staff, the office has a booklet which contains information about available scholarships. A separate list of restricted scholarships is also published. These restricted scholarships have specific requirements, often geographic. For instance the Edward C. Delano Scholarship is restricted to students from Wayne County, New York.

Cornell University also has a loan fund with short- and long-term loan programs. The short-term loans are granted for emergency situations. These interest-free loans are due within 90 days or before the end of the academic year (whichever is earlier). The long-term loans, however, are used for total college education costs. While the student is attending college his loan is interest-free. The 4 percent interest begins 90 days after graduation, and the loan is usually repaid in monthly installments.

Besides the Cornell scholarships, New York State's Regents and Scholar Incentive Programs are also a source of assistance. Now that tuition is charged in all New York State Colleges, all Cornellians are eligible for the incentive award, or an increased Regents Scholarship. The incentive award, which is based on need, varies from $50-150 per term and is offered to any student who has a minimum tuition charge of $160 per term. Students who do not have a Regents Scholarship will benefit most from the incentive award, which is figured on the remaining tuition cost after the Regents Scholarship has been deducted. The Incentive Program does not consider fees as part of the tuition cost. Any student who would like to apply for the incentive award should write to the State University of New York, State Education Department, Regents Examination and Scholarship Center, Albany 1, New York. Application forms will be available in May.

New York State also aids its resident students by an established loan program. These loans are available to all state residents who are enrolled as full-time students in an accredited college which grants degrees. The lending institutions of New York, which grant the loans, have the contract and guarantee of the New York Higher Education Assistance Corporation (NYHEAC). Under this program the qualified student borrows from the lending institutions on promissory notes which require only the student's signature. The NYHEAC assumes the interest payment while the student is enrolled in college. Upon graduation, however, the student must begin to pay three percent interest.

National Defense Loans are also available through Cornell's financial aid office. All regularly enrolled students are eligible for this loan. Special preference is given to students with a superior background who either wish to teach in elementary or secondary schools or who major in sciences, mathematics or a modern foreign language. The size of the loan is determined by financial need. The maximum amount awarded is $1,000 per year. No interest is charged on this loan until one year after graduation or military training. If a student teaches in a public elementary or secondary school, 10 percent of his loan and interest will be forgiven for every year he teaches (for a period of five years). Therefore, the minimum amount to be paid by a teacher of 5 years' experience is one-half of his original loan.
One of the first warnings I got when I became a football reporter for the Cornell Daily Sun in 1959 was something to the effect that I would be watching the dullest football in the country.

Now, as I begin my career as a Cornell alumnus, my only regret about Cornell football is that I won't be around for many more games. The prediction four years ago? Nothing could have been more wrong. It will be many years before I see as many exciting football games as I saw at Cornell.

A few days after the warning, I went to see my first game. It was the opener of the 1959 season, and it was against Colgate. That first “dull” game was won by Cornell on a touchdown in the last 19 seconds of the game. The Big Red had taken a 14-0 lead into the final quarter, but Colgate scored twice in the last period and led by a 15-14 margin until the final moments.

Two weeks later I went to Cambridge to see Cornell play Harvard. The Sun had published a spoof edition of the Harvard Crimson, with large headlines declaring that the football game was fixed. At the end of the game, it was hard to imagine how a script writer could have made the game any more exciting.

Cornell trailed, 16-0, late in the third period. The Big Red had been clearly outplayed and out-hustled all afternoon. A touchdown by Cornell at the end of the third period didn’t add a great deal of hope at the time.

But then in the fourth period Cornell scored on a play almost identical to the one which had defeated Colgate two weeks earlier. On its own 24-yard line with 24 seconds remaining in the game and trailing 16-12, Cornell tried the same play again. The result was a 76-yard touchdown and one of the most unforgettable football finishes ever.

The 1960 season made me remember the warning. It was a dull season, and I began to think that the 1959 Colgate and Harvard games were just mutations. But then came the 1961 season, the appointment of Tom Harp as head football coach, and the Princeton game, which no witness will ever forget.

With slightly more than three minutes remaining, Princeton led by a 30-10 score. The victory seemed so sure for Princeton that Coach Dick Colman said in his scrubs, “Man is created to succeed. The American way has no place for a man who looks upon failure favorably.”

The kick went its ten yards, bounced off a Princeton lineman, and was recovered by Cornell. On the next play, quarterback Gary Wood ran for a 43-yard touchdown, and Princeton led, 30-25. Then Cornell tried another onside kick, and again it was recovered by the Big Red. But the official ruled that the ball had gone only nine yards, one yard shy of the required distance. Princeton still won the game, but not before Cornell had scored two touchdowns in less than one minute, and had come within a foot of getting a crack at the touchdown that would have reversed the results.

Last season was one of the most thrilling ever for Cornell in terms of individual games. The Harvard game was decided by a matter of inches on the last play of the game. As the clock ran out, Cornell was charged with a penalty. Since a game may not end on a penalty, Harvard had one last chance, despite the fact that no time remained on the clock. Trailing Cornell 14-12, the Crimson attempted the field goal which would have given them a one-point victory if successful. The 36-yard attempt veered off at the last second and missed by less than a foot.

A few weeks later Cornell came from behind four times to upset Princeton, 35-34. Gary Wood’s performance in that game was the finest individual show in Cornell football history, according to almost all observers in the press box.

Much of the team’s success can be attributed to the coaching of Tom Harp. Thomas Moore Harp came to Cornell University in 1961 with one burning desire — he was determined to build winning football teams. To the Harp way of thinking, Grantland Rice missed the boat when he wrote:

When the Great Scorer comes to write against your name—
He marks—not that you won or lost
—but how you played the game.

The 34-year-old Cornell football coach believes that “Man is created to succeed. The American way of life has no place for a man who looks upon failure favorably.”
As Exciting as Any

Tom Harp believes that the best way to produce winning football teams is to produce the desire to win. He has discovered that a football team can do almost anything if it has the proper mental attitude; and the motive behind almost every aspect of the Cornell football program is to convince the players of just this.

In rejecting the Grantland Rice theory, Harp is quick to point out, “We do not mean to condone dirty or illegal football. We insist on close adherence to the rulebook. But we have no place for a boy who feels good after a loss.”

In Harp’s first two seasons at Cornell, his teams were anything but consistent winners. But his influence on Cornell football was apparent from the start. Harp’s plans are of a long-range nature, and all that he promises for his first few years are signs of the ultimate success of his program.

In his first year at the helm of the Big Red, Harp went to Princeton with a team that was demoralized from injury and defeat. Harp was pleased with his team’s incredible effort against Princeton that year, but he was quick to point out that the record books only show that Cornell lost and Princeton won.

The following year, in the fall of 1962, the Cornell chances of beating Princeton appeared even slimmer. But by this time Harp had spent an additional year instilling in his players a burning desire to win. After Cornell’s triumph, Harp said, “This shows that anything is possible, no matter what the odds, if the desire is there.”

Now Harp is preparing for his third year at Cornell. While he still makes no promises about the exact date that his expectations for Cornell football will be achieved, he does expect further signs of improvement this fall. Harp takes great pride in feeling that neither inferior conditioning nor attitude have cost Cornell a single football game since he began his tenure at Cornell.

Harp’s ideas about attitude and conditioning first took shape at Muskingum College, where he quarterbacked Ohio Conference championship teams in 1949 and 1950. There he was quickly impressed by the emphasis which his coach, Ed Sherman, placed on attitude and conditioning.

Even more important were the three years which Harp spent under Col. Earl “Red” Blaik at West Point before coming to Cornell. Harp considers Blaik the top advocate in the country of mental and physical conditioning. “No Blaik-coached team was ever out-conditioned or outfought,” recalls Harp. “Even after the 1951 scandal, when there was a complete void of talent at West Point, Blaik’s teams made some unbelievable showings which can only be attributed to superb conditioning and an insatiable desire to win.”

When he arrived at Cornell, Harp established a strict set of training rules. Anyone caught breaking a training rule was immediately dropped from the team. Harp explains, “There is no vote to determine whether or not the player should remain on the squad. When the chips are down on the two-yard line, we cannot take a vote to see who is prepared for the situation.”

In an effort to reduce the number of injuries during the season, Harp installed an off-season physical training program. “An athlete must be in top condition at all times,” insists Harp. During the summer months, Harp and his staff send out letters with training instructions to the players. When the squad reports to its first practice in September, Harp administers a modified version of the Marine physical fitness test to see how well the summer training program has been adhered to. “Our first year, several of the fellows regarded the test as a good conversation piece. They suffered severely during the first few weeks of practice. The second year almost everybody passed the test.”

Similarly, during the pre-season practice during Harp’s first year at Cornell, 11 players were unable to take the rigor of the Harp-designed practice sessions, and quit the team before the first game. “The second year,” according to Harp, “the boys were a bit more anxious to play football, and to win.” Only three quit the team before the start of the 1962 season.

With Harp at the helm, and team attitude and conditioning improving all the time, it should be anything but a dull season this fall.

Gary Wood (No. 19) with the ball during the Princeton-Cornell game, 1962.
New Horizons for International Agricultural Development

by Dioscoro L. Umali

Editor's Note—This article is a condensation of remarks made by Dr. Dioscoro L. Umali, Dean of the College of Agriculture of the University of the Philippines, to the faculty, during a special visit to Cornell in June, 1963. Dr. Umali received a Ph.D. degree in plant breeding from Cornell in 1949.

Three years ago, the cooperative venture in agricultural development carried out for eight years (1952-1960) by Cornell University and the University of the Philippines College of Agriculture at Los Banos was terminated by mutual agreement. The outstanding achievements of this project, the Cornell-Los Banos Contract, have encouraged the two institutions to explore the possibility of a higher level of partnership. The invaluable experience gained and the opportunity for evaluating it could well serve as a model of inter-university cooperation all over the globe.

At no point in history has there been such a need for international development as now. In this age when the world is shrinking to a mere neighborhood of nations, when man has the means to destroy himself and blast this planet into nothingness, and when three-fourths of humanity live in abject poverty and hunger, it is doubtful that this community of nations can long exist and be secure. If we are to heed the warnings of history, this situation cannot be ignored, lest it lead to calamitous economic and political upheavals. It is the moral and human obligation of the “have” nations to mobilize their resources in bringing about a life of dignity and freedom for the unfortunate.

“The world is blessed,” according to U. S. Secretary of Agriculture Orville L. Freeman, “by one of the most fortunate coincidences of history.” While more than half of humanity does not have enough to eat, and lives in poverty and misery, the developed nations are producing an abundance of food.

In “sharing their abundance to create more abundance” there could not be a more appropriate and realistic approach by the developed countries than to offer their human resources for social and economic advancement. Education is the handmaiden of progress. Former President Merrill of Minnesota once said, “Human welfare depends upon science and technology and democratic freedom. Without the first, man becomes a slave of nature. Without the second, man becomes the slave of his fellow men. Both are not possible without education.” Education is the safeguard of enlightened government and a prosperous economy.

A university contract with an educational institution of a developing country to train and develop leaders who can intelligently guide their countrymen in nation building, is a sound and meaningful investment, dollar for dollar, for the following reasons:

1. It has a strong moral appeal because it involves education of people.
2. It has the least likelihood of being misunderstood.
3. It cannot be misconstrued as political or economic domination.

Many universities, particularly the land-grant institutions in the United States, are effectively communicating their experience and know-how to help accelerate the development of agriculture in developing countries. Cornell is an excellent example of one such University. We salute the College of Agriculture at Cornell for accepting the challenge to develop agriculture internationally. This great institution deserves the commendation of the developing nations for its pioneering work in international agricultural development. It equally deserves to be congratulated for the vigor of its leadership; for its experience in integrating teaching, research, and extension activities; for its ability to carry out its mission in any setting and at any time; for its awareness that understanding other people and cultivating their good will and friendship is a means of achieving the oneness of humanity.

Because Cornell has had considerable experience in training foreign students on its campus, because it has a faculty with a wealth of experience in the art of university assistance, because it has valuable connections and good public relations with local and foreign foundations and agencies, and because its professors visiting in foreign countries work not only with top officials but also with village folks, its international programs have been more effective, and have accomplished better results than similar undertakings by other universities. Most specifically, the Cornell program has rebuilt and strengthened inestimably the University of the Philippines College of Agriculture.

Dean Umali (left) with Animal Husbandry Professor George W. Trimberger, inspecting a cow in the Cornell dairy barns.
A Great Library System

Whether you end up in Mann, Uris, or Olin library in your search for a quiet corner or a special book, you will be pleased to know that you are making use of one of the best library systems in the country. With its total of 2.3 million volumes, Cornell’s system is the seventh largest in America. It also ranks among the top ten in rate of development. What university can boast three major libraries, one built within the last two decades, another within the last three years, and a third completely renovated within the last 12 months? Nor must we forget the fine smaller libraries such as the one in the College of Engineering, or the music library, or the Industrial and Labor Relations Library.

Agriculture and home economics students will probably spend most of their time at Mann, for here are housed all the books so necessary to the sciences of agriculture and home economics. But few students will spend their four years here without more than a passing acquaintance with the intimate and colorful study rooms at newly-renovated Uris, or the vast and impressive facilities for advanced study at Olin.

It is only a short time before each new student realizes that in his own mental picture of Cornell, there is usually a library.

Photograph: The Seal of the State of New York is carved over the entrance to Mann Library.
Effective with the fall term of 1963, the College of Agriculture has established a new undergraduate program in international agricultural development designed to prepare students for work in foreign countries. Students from the United States or abroad, who are interested in this program will select a major in one of the more than 50 fields of specialization in the College and a minor in international agriculture. In addition to specific basic courses in agriculture, students must meet requirements in a foreign language and in one of the area-study programs. A total of 25 practice units are required, including 13 in the area of specialization and a minimum of 12 in farm experience.

Simultaneously, an interdisciplinary minor in international agricultural development has been established in the Graduate School. In addition to the basic requirements for his major, a graduate student must complete courses that will help him apply the knowledge of his major subject to the conditions of newly developing nations. In certain majors, students will be expected to do their research in other countries. Further details can be obtained from the Office of the Graduate School.

Undergraduates at the College of Agriculture will benefit from the establishment of two scholarships by the R. T. French Company. The scholarships are $1,000 each and will be made available each year starting with the 1964-65 school year. Selection will be made by the scholarship committee of the college on recommendation of the dairy and food science department.

A new product developed at the College of Agriculture, and currently being test-marketed in 12 Syracuse supermarkets, eliminates the job of boiling and peeling hard-cooked eggs. This white, sausage-shaped egg roll is actually instant hard-cooked eggs in a strip. It is made by breaking eggs into a thin plastic casing, and then cooking them. All the housewife must do is slice it.

Daniel G. Sisler, assistant professor in agricultural economics, recently received recognition and an award from the American Farm Economics Association as the author of one of the three outstanding Ph.D. theses in agricultural economics in the United States last year. Sisler was recognized for his thesis entitled "Direct Production Payments in the Feed-Grain-Livestock Sector of American Agriculture," which was presented to the Cornell Graduate School in 1962.

A 514-page history of the College of Agriculture was published recently by Cornell as part of the University's contribution to the observance of the centennial of the Morrill Act, which established the land-grant colleges. Written by Gould P. Colman, college historian, the book is available from the Mailroom, Stone Hall, Cornell University, Ithaca, New York, at a price of $5 per copy. This detailed year-by-year history deals with such topics as the agricultural situation before the College was founded, the cooperation between Cornell and New York State, the College's subsequent contributions to agricultural change, the work of the men who developed the College, the agricultural experiment station movement, and the College's efforts in teaching, research, extension, and international agricultural development.

University President James A. Perkins announced in early September the appointment of four members of the faculty to important administrative positions: Dale R. Corson, dean of the College of Engineering as provost; William R. Keast, dean of the College of Arts and Sciences as vice president for academic affairs; Franklin A. Long, professor of chemistry and a recent assistant director of the U.S. Arms Control and Disarmament Agency as vice president for research and advanced studies; and Thomas W. Mackesey, dean of the university faculty as associate provost for planning.

The four men will join J. L. Zwingle, vice president; John Summerskill, vice president for student affairs; John E. Burton, vice president for business, Arthur H. Peterson, controller, Neal R. Stamp, counsel, and Paul L. McKeeegan, director of the budget, in leading policy-making roles on a staff working closely with President Perkins.
ALUMNI

Some recent statistics from the College of Agriculture on the starting occupations of men and women graduates seem to reflect some of the important changes in agriculture in the years 1951-1960.

Two noticeable trends are the increase in the percentages of men and women entering graduate study; and the increase in the percentage of women choosing public school teaching as a starting occupation.

General occupational categories for men were listed in the study as: farming, agricultural business, public jobs in agriculture, graduate or professional study, non-agricultural work, and armed services. For women, the categories were: homemaker, graduate or professional study, laboratory technician or research worker, public school teacher, and other jobs.

Male students graduating between 1951 and 1955 totaled 1,145. They were compared with the 1,022 men who graduated between 1956 and 1960. Female graduates in 1951-55 numbered 159; and in 1956-60, 206.

A summary of the figures for the 1956-60 male group shows that more men entered graduate study than any other area (26 percent). Agricultural business was the second most popular (14 percent), with farming the third (12 percent) and public jobs in agriculture the fourth (10 percent).

The number of men who entered farming dropped in the 10-year period from 16 percent to 12 percent, while the agricultural business category enlarged by 2 percent, and non-agricultural jobs increased from 2 to 7 percent in the same period.

In this 1956-60 group, the most common starting jobs in agricultural business (in order of preference) were the following: feed and farm supplies, food distribution, dairy companies, florist and nursery, farm credit, food processing, farm equipment, and general sales. These areas accounted for 122 of the 143 people included in the agricultural business category. Within the 10-year period, there were strong increases in the number of people entering the food distribution, farm credit, and general sales areas.

The commonest public jobs in agriculture, in order of preference were the following: vocational agriculture teaching, assistant county agent, 4-H Club agent, college departmental jobs, and Soil Conservation Service. These jobs accounted for 88 out of the 104 graduates.

<table>
<thead>
<tr>
<th>JOBS CHOSEN BY COLLEGE OF AGRICULTURE GRADUATES</th>
<th>1951-55</th>
<th>1956-60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farming</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Agricultural business</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Public jobs in agriculture</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Graduate or professional study</td>
<td>17</td>
<td>26</td>
</tr>
<tr>
<td>Non-agricultural work</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Armed services</td>
<td>33</td>
<td>19</td>
</tr>
<tr>
<td>&quot;Unknown&quot;</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homemaking</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Graduate or professional study</td>
<td>16</td>
<td>23</td>
</tr>
<tr>
<td>Laboratory technician</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>Teaching</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>&quot;Other&quot;</td>
<td>23</td>
<td>11</td>
</tr>
<tr>
<td>&quot;Unknown&quot;</td>
<td>27</td>
<td>17</td>
</tr>
</tbody>
</table>

in the category. The number of students choosing vocational agriculture dropped sharply in the later group—from 47 out of 106 to 25 out of 104. Within the same two groups, however, men entering as assistant county agents increased from 14 to 23.

Among those in the 1956-60 group who entered graduate or professional study, the most popular fields, listed in order of importance, were: business administration, agricultural economics, veterinary medicine, agricultural education, theology, agronomy, and conservation. These fields accounted for 147 of the 267 men in the category. The number of men entering advanced study in business administration from 1956-60 increased from 22 out of 191 in the earlier group, to 48 out of 264 in the later group. The number of men entering advanced study in agricultural education also more than doubled—9 in the first group and 17 in the second.

Women’s categories, and their accompanying statistics, prove what is perhaps obvious—that women choose different occupations than men do. Virtually no women entered the broad field of agricultural business, although several such jobs may be included in the category “Other jobs.” Moreover, the percentage of full-time homemakers seems to be increasing, at least as the first job taken immediately after graduation. In the 1951-55 group, 11 percent became housewives, while in the second five-year period, 16 percent did so. However only 1 percent fewer women than men entered graduate study in the 1956-60 period, and the increase in the percent of women choosing graduate study was about the same as the increase in men doing so. As with men, more women chose graduate study as a starting occupation than any other category. Among the women, bacteriology has continued to be one of the most popular of the graduate specialties. In the earlier group of classes, only 5 percent of the women went into public-school teaching, but 14 percent did so in the later group. This increase constitutes the largest change in any category for women.

A total of 19 percent of the women in the 1956-60 group are laboratory technicians or research workers; 16 percent are homemakers, 14 percent are teachers, and 19 percent have other jobs such as secretarial work, landscape and florist work, journalism or editorial work, college departmental work, consumer research, social service, merchandising, and military service.
GLF's Profit Feeding Plan...how it helped Lester Stull raise his herd average 3,000 lbs.

GLF's Profit Feeding Plan...the results after three years.

Higher Grain Feeding proves 7 out of every 10 cows can produce more milk—profitably.

One PFP herd average on the way up

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of cows</th>
<th>Grain feeding above Morrison's Standards</th>
<th>Average Production Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>442</td>
<td>35% above</td>
<td>2,031 lbs.</td>
</tr>
<tr>
<td>1961</td>
<td>224</td>
<td>47% above</td>
<td>2,462 lbs.</td>
</tr>
<tr>
<td>1962</td>
<td>69</td>
<td>46% above</td>
<td>3,750 lbs.</td>
</tr>
</tbody>
</table>

Tests on high-grain feeding

In the same three years, GLF has been conducting high-grain feeding tests on selected dairy farms. These tests show that 7 out of every 10 dairy cows will respond to high-grain feeding in early lactation. Test increases by individual cows ranged up to 6,000 lbs. more milk per year.

Profit Feeding Plan results

In the last three years 7486 dairymen have enrolled in the GLF Profit Feeding Plan. Approximately 85% of those herds with DHIA records have shown significant gains in income.

Here are the DHIA figures of some 483 herds using the GLF Profit Feeding Plan.

51 herds...$62.35 increase (average per cow income-overfeed-cost over the previous year)

60 herds...$33.63 increase

102 herds...$26.96 increase

199 herds...$15.03 increase

71 herds showed no appreciable gain

The money-making potential varies from farm to farm. The price of milk, the cost of concentrates and formula feeds, the quality of the cows, forage costs and quality...all will affect the amount of money to be gained from challenging your cows with higher grain feeding. But the gain is there. All you have to do is try it.

Find out this fall how much more money GLF's Profit Feeding Plan can make for you. Enroll in PFP today, by contacting your GLF Dairy Representative. Cooperative GLF Exchange, Inc., Ithaca, N.Y.
IN THIS ISSUE

Cornell's Challenge ................................................................. 2
Mixed Reactions To Freeman ...................................................... 2
The Philippines: Another Era of Cooperation ................................. 3
It's All Downhill ....................................................................... 4
Dean Palm Cites World Agriculture
As Key to Future ....................................................................... 5
Alumni ...................................................................................... 6
Our Diplomat in South America .................................................. 8
The Proctor: More Than Discipline ............................................... 9
Collective Playpens For Soviet Children ....................................... 10
Countryman Capsules .................................................................. 11
Advance Against Apathy ............................................................. 12
Breaking the Barrier .................................................................... 13

Staff

Editor-in-Chief ................................................................. Frank Fee, Jr. '65
Managing Editors .......... Toni Gailey '65 and Richard A. Heinrich '64
Circulation Manager ....................................................... Jay Brodell '64
Librarian ............................................................................... Anthony Sinopoli '64

Freshmen: Brenda J. Corlett and Donald G. Semmler.

The Cornell Countryman is published monthly from October through May by the New York State College of Agriculture, 490 Roberts Hall, Cornell University, Ithaca, New York. Second-class postage paid at Ithaca, New York. Printing by Norton Printing Co. of Ithaca. Subscription rate is $1.75 a year or two years for $3.25; three years for $4.50; single copies, 25 cents. A member of Agriculture College Magazines Associated. Represented for national advertising by Littell-Murray-Barnhill, Inc., 369 Lexington Avenue, New York 1, N.Y.
Farm equipment lives up to its design with the extra strength and endurance... the extra HARVESTPOWER of Link-Belt chain

HARVESTPOWER to spare! It's built into every strand of Link-Belt chain. Extra capacity to withstand starting, shock, and dynamic loads... to provide the trouble-free transmission of positive power at that all-important time when it's really needed... season after season.

The superior HARVESTPOWER of Link-Belt chain is a result of many manufacturing refinements. These processes—which go beyond ASA dimensional standards—add up to chain that excel in strength and durability. Today, over 300 farm machine manufacturers are taking advantage of the extra measure of HARVESTPOWER built into Link-Belt chain.

Link-Belt offers industry's most complete line of drive and conveyor chains, chain attachments and sprockets. Also “bonus” services: application counsel, field analysis, laboratory service and others. These services multiply the value of Link-Belt chains, but not the price!

LINK-BELT
CHAINS AND SPROCKETS

CORNELL'S CHALLENGE

“We must all share in the task that is now our main business, to demonstrate by thought and work that Cornell is a great university on the move,” stressed Cornell’s new president in his inaugural address, October 4.

Speaking to a capacity audience in Bailey Hall, James A. Perkins stated that in order to remain a great university, Cornell must re-examine its goals with respect to its obligations to mankind. He suggested the 18 months preceding the Centennial celebration as a perfect time for this re-examination and redefinition of Cornell’s obligations.

Three points outlined by Mr. Perkins as a basis for charting Cornell’s future were: “the needs of responsible and universal man; the consequences of rapid social change; and finally, the requirements of a university that would lead, not follow.”

Expanding on these points, the president stated that the burden of Cornell’s future plans rests heavily upon future students. “We want more young men and women of high intelligence and talent, motivated to prepare themselves for the large tasks they must assume. We want those who, during their years at Cornell, will be able to free themselves from any lingering biases of race, color and creed; who will be devoted to their country, yet recognize the universality of the world’s problems; who will come to realize that it is their own job to develop their own talents, whatever they may be; and who will be sensitive to the delicate balance between the requirements of individual self-fulfillment and the restraints required for adult membership in a complex society,” he said.

“To attract these students,” President Perkins said, “Cornell must be certain that the undergraduate program does not slip too far down the scale of priorities and consequently endanger the balanced program that distinguishes a modern university from a research park.”

Speaking of the university’s obligation to society Mr. Perkins said, “We are, of course, the land-grant institution of New York State. This fact, plus our stature in the world of education, gives us the opportunity to participate in the affairs of the State, particularly in the educational problems that press on our colleagues in Albany. We shall have to discover how we can exercise the maximum useful influence and be of the most service.”

Concerning the local area, Perkins said, “We must consider how we can be of increased assistance to our own immediate community. Surely the town of Ithaca and Tompkins County have more claims on our attention than Ouagadougou in the Upper Volta. Cornell has an immediate and direct stake in its own community and we will not neglect this responsibility.”

The President concluded, “we lead from strength, but we must be stronger, far stronger in every respect, if we are to enter our next century running hard but breathing easily.”

MIXED REACTIONS TO FREEMAN

“That doggoned Orville, he’s got an answer for everything.”

Such remarks were common last month when Secretary of Agriculture Orville L. Freeman spoke in Syracuse during a series of “Report and Review” conferences conducted across the nation.

Described by Secretary Freeman as an opportunity “to listen to some good advice from the grassroots of American agriculture,” the conference drew 2,000 persons, mostly dairymen, in the only conference scheduled for New York State.

Reactions to the Secretary and his statements were generally favorable. Said one member of the Dairymen’s League Cooperative Association, which claimed nearly half the attendance, “I think the farmer’s ideas are going to get back to Washington.”

Commenting on Secretary Freeman’s reception in Syracuse, another dairymen said, “I expect a lot of people are satisfied with the position of the Secretary of Agriculture.”

Some farmers, however, expressed skepticism toward the conference. When leaving, one claimed that he was “as confused as when I came in.” Another stated that he learned something from the meeting, “but, I don’t think there’ll be a change in his thinking toward farm policy.”

Secretary Freeman also got a pair of red suspenders from Robert Monson (right), Mexico, N.Y., dairyman.

Photo courtesy Robert Dennis
Among the latest developments in Cornell's worldwide scope of interest is a new cooperative effort with the University of the Philippines.

Last month it was announced that the Philippines' College of Agriculture at Los Banos and the College of Agriculture at Cornell have embarked on a program designed to give both colleges an expanded sphere of influence in the agricultural field.

Called the Philippine-Cornell Graduate Education Program, the project will be supported by the Ford Foundation which has granted $1,496,000 to the University of the Philippines for its College of Agriculture for the first two years. Of these funds, $926,000 will be administered directly by Cornell. This money will be used primarily in providing American personnel to live and work at the Los Banos school community. The Rockefeller Foundation is contributing to the project by providing housing for visiting graduate students and faculty. It will also provide fellowships and training grants for Filipino students.

Expected to continue for at least five years, the principal features of this program are:

1. Further development of staff and facilities of the College of Agriculture, University of the Philippines, at Los Banos.
2. Training of Filipino and Asian graduate students.
3. Training of American graduate students in the Philippines.
4. Exchange of Filipino and American staff.
5. Professional training of American staff in agricultural production under tropical conditions.

The founding of the International Rice Research Institute at Los Banos College led to the birth of the Philippine-Cornell Graduate Education Program. The Ford and Rockefeller Foundations centered the institute at Los Banos and began importing scientists from all over the world to study and improve the all-important crop in the Far East--rice.

Dean D. L. Umali of the Philippine College of Agriculture at Los Banos recognized the opportunity to proceed at a faster pace in developing the College's graduate school. He met with advisors of the Rockefeller and Ford Foundations, who agreed that the foundations would assist in the new program at the University of the Philippines. At this point, the College of Agriculture at Cornell was invited to contribute some of the know-how and experience that such a program would require.

The two schools and the two foundations have now combined their efforts to make the Los Banos Agricultural College an important center for graduate training in agriculture. Commenting on the project, Cornell's Dean of Agriculture, Charles E. Palm, said, "This program, coordinated with other activities at Cornell's Center for International Studies, will be of great value to both universities."

There are three Cornell professors in the Philippines who are already engaged in this project. Professor Gilbert Levine, agricultural engineer, and his family left for the Philippines on September 19. On a two-year assignment, he and Philippine staff members will serve as a team, working on problems of water resources.

Professor M. C. Bond, who has been in the Philippines for the past year working with extension and farm and home development programs of the College of Agriculture, will become a staff member under the new project. In addition, Professor Nyle C. Brady, head of the agronomy department at Cornell, is serving in an administrative capacity to get the program underway. In November, he will return and Professor Turk, director of international agricultural development, will take over these duties.

The first formal large-scale program between Cornell and the University of the Philippines was started in 1952 under the auspices of the U.S. aid program. That program involved rebuilding the war-damaged College of Agriculture at Los Banos, and the development of the Agricultural Experimental Station. During the eight-year term of the Cornell-Los Banos project, 51 American professors, including 35 from Cornell, served in training professional agricultural personnel in research, teaching, and extension.
IT'S ALL DOWNHILL

by Richard A. Heinrich '64

Since Ithaca's unpredictable weather makes snow possible from
November to May, Cornell's many ski buffs are readying their equipment
and hoping for an early season. Below, Dick Heinrich tells what might
happen when a non-skier joins the ranks of beginners.

You have sailed past tall pine trees going thirty-five miles an hour
in your automobile. Can you imagine yourself doing the same thing with
out the protection of a car? Pretty dangerous way to run around you might
say, but in essence, this is skiing.

Just put two thin hickory skis on your feet, aim yourself down a snow-
covered hill, and let go. You're off, you're flying. Cold winter air presses
on your body, fresh fallen snow sprays from your trees. Trees and moun-
tains pass in a blur. This is just part of the thrill felt by everyone who
ever ventures to one of the many ski areas in the world. It is a personal
excitement that can only come with participation and not with written
explanation.

Mount Tom, Holyoke, Massachusetts, is a rather small, but well
equipped ski area. At the base of a short slope is a warm and colorful
lodge. Inside, reddened, smiling faces can be seen everywhere. Small boys
play tag around the hearth while their parents sip steaming cups of coffee.
Now and then a young couple enters, clad in colorful ski outfits. It was
here that I had my first taste of skiing. With two friends who were seasoned
skiers for teachers and with plenty of borrowed equipment, I set out for
a pleasant afternoon. My initial attitude was one of indifference and my
first problems seemed insurmountable. I was a struggling figure in this
comfortable lodge. I was red in the face from half an hour's fight with a
pair of tight ski boots and stiff stretch pants, and was trying to act right
at home. By that time I was well out of the mood to ski. I felt more like a
deep sea diver who had had his diving suit lined with rubber cement.

Outside the lodge was still another challenge. By the eighth attempt,
I finally had the skis on my feet and pointed somewhere in the vicinity of
the beginner's slope. My feet hurt from the boots. My back hurt from
constant bending, and I was completely soaked with perspiration under
my water-resistant parka. If this was skiing, I thought, give it back to the
Europeans.

After a quick lesson in snow plowing, I made a trial run. It was short
and satisfying: up and down a few times, a few falls, and a few thrilling
moments. Being a daredevil, I told my companion that I was ready for
the top.

A chair lift is a very curious piece of machinery. From the ground it
looks like sawed-off park benches strung from a cable. We made our way
to a line waiting to load onto the lift. Watching the other skiers being
lofted is thrilling in itself. Inch by inch we made our way along the
line. I began to chat with a Smith girl who was waiting beside me. The
man in front of us seemed to be having difficulty moving forward.
He was making mighty efforts to walk, but it was no use. His skis
seemed stuck fast to the snow. I suddenly realized that I was stand-
ing rather close to him—say about three feet. A quick calculation told
me that skis are about seven feet long, three and a half feet on either
side. By this time the man had figured out why he couldn't move.
He turned around and bellowed at me, "Sir, will you please remove
your skis from mine so I can proceed with the rest of the line?" The
Smithy laughed and I was too em-
brasssed to move. We finally man-
gaged to get onto a chair, and soon
we were traveling through the air
up the side of the mountain. The
chair was suspended about thirty
feet above the ground and glided
slowly between the pine trees. At
the end of the lift, a snow and ice
covered chute led to a resting area
in a small glade.

I smiled at the Smithy, who
smiled back as she skied off with an
Alpine skier in short pants and high
socks. My friend said, "Let's go." I
said, "Go where?" as I peered over
a five-hundred foot drop down a
three-thousand foot slope. Three
bad falls, a hundred-foot slide, and
dozens "look-outs!" Later we were
at the other end of the slope looking
up—me from flat on my back.
Shaking the ice from my hair and
feeling bruised, I said, "Let's go
again."

This time, a cup of warm stew
was our goal instead of the chair
lift. It was wonderful to remove the
cumbersome skis. I felt like a but-
terfly who had just come out of his
coconut. Snow was in my beard and

(Continued on Next Page)
DEAN PALMITES
WORLD AGRICULTURE
AS KEY TO FUTURE

by Jay Brodell '64

“Cornell and other land-grant institutions are placing greater emphasis on their role in international agricultural development,” said Dean Charles E. Palm of the College of Agriculture, last month.

Speaking to scholarship holders and freshmen at a barbecue sponsored by Ho Nun De Kah, Senior Men’s Honorary Society, the Dean emphasized that “in addition to its state and national scope, Cornell University has had an international interest since its founding... Last year we had about a third of the more than 800 students from about 85 countries that came to Cornell for undergraduate, graduate and special programs... If we can develop a common bond of friendship in the search for truth and understanding there will be greater hope for humanity in the years to come.”

“Early in 1963,” he said, “Cornell University formally recognized international agricultural development as the fourth dimension of its responsibility, along with teaching, research, and extension.”

“Professor Kenneth L. Turk was named the director of this new and important area of the College program,” Dean Palm continued. “During the eight year period from 1952 to 1960, we worked cooperatively with the College of Agriculture, University of the Philippines, to assist in the rehabilitation of this war-ravaged institution. It was a wonderful experience for us. Recently, upon the invitation of the University of the Philippines we returned to work again... in a long range program to strengthen the teaching, research, and extension programs, and to assist in the development of a graduate-training center for agriculture in the Philippines.”

“I am confident that, because of its excellence, it will serve a broader sphere of influence since the college at Los Banos is attracting increasing numbers of students from other countries of southeast Asia.”

“Students interested in training for careers in international agriculture will find this new specialization offered by the College of Agriculture at Cornell,” the Dean reminded freshmen. He added that graduate students may develop a minor in the same field.

Students currently holding scholarships in the College of Agriculture were presented after the Dean’s speech. Special recognition was given to Uri Mingelgrin, a sophomore who is the recipient of the Alpha Zeta Scholarship Key for 1963. Uri is majoring in agronomy and comes to Cornell from Israel. His 94.38 freshman average placed him at the top of his class.

Introduced at the barbecue were Alberto Lesser and Ingvar Mattsson. Alberto, a student at the University of Buenos Aires, Faculty of Agronomy and Veterinary, Buenos Aires, Argentina, is studying at Cornell this year under the Argentine Exchange Program. Ingvar Mattsson attends the Royal Agricultural College, Uppsala, Sweden, and is spending the year at Cornell under the Swedish Exchange Scholarship program. Ingvar and Edward L. Smith '64, a member of Ho Nun De Kah, entertained the gathering with Swedish folk songs.

(Continued from Page 4)

A roundish man in red pants laughed as he passed and said, “You’re supposed to ski on it, not in it, my good man.”

The Smith girl was back at the lodge, but not with her Alpine friend. This time I had more luck and struck up a warm conversation. This, I realized, was one of the fringe benefits of skiing. Skiing like nothing better than to sit around and talk skiing. It took no time at all for me to learn the proper jargon. Names of skis, poles, boots, and Olympic champions were salted into the conversation with utmost artistry. I made a dinner date, and she offered to give me further lessons.

The lift ride was even more enjoyable this time. Miss “Smith” knew many amusing ski stories about people like me who tried to play the role of an expert skier. Among other things, she told me that people who talk the best are often the worst skiers. From that point on, I kept my mouth shut about skiing and told her what a great swimmer I had been in high school instead.

The run down was not so quick this time. We stopped and rested on the way and admired the spectacular views. After very few falls we reached the bottom. The chair lift had closed for the day, and we walked back to the lodge for more chats over an enjoyable dinner.
(Nearly forty years of Cornellians in this issue and we've barely scratched the surface. The Cornell Countryman has never seen anything like it! When the alumni information blanks were mailed this summer, we could hardly anticipate the overwhelming response of the College of Agriculture graduates. The staff is busy processing the many interesting replies and we'll be forwarding news of your classmates in forthcoming issues of the Countryman. Below you will find merely the beginning of a monthly service to our readers.—Ed.)

DR. LLOYD H. DAVIS '42, former professor of agricultural economics and extension teaching and information, last month was appointed administrator of the Federal Extension Service. He has been deputy administrator since May, 1962, and acting administrator since June, 1963. Dr. Davis received a B.S. in 1942, an M.S. in 1947, and his Ph.D. in 1951, all from Cornell. He was formerly assistant county agent of Wyoming County.

ANSON H. ROWE '07, Feura Bush, N.Y., retired from farming in 1946, but still lives on part of the land purchased by his family in 1834. From 1923 to 1930 he was associated with the New York and Pennsylvania Joint Stock Land Bank and with the Federal Land Bank of Springfield. He was an appraiser with the Farm Credit Administration from 1931 to 1934. He is a member of the Cornell Club of Sarasota, Fla.

E. H. THOMPSON '09, 551 Longmeadow St., Longmeadow, Mass., owns a 329 acre farm at Delhi, N.Y., much of which is devoted to reforestation. He is a former assistant chief of the Office of Farm Management of the UDA, and past president of the Federal Land Bank and Federal Intermediate Bank of Springfield, Mass.

L. R. SIMONS '11, 423 Oak Avenue, Ithaca, N.Y., professor emeritus of Extension Service since 1954, was director of Extension at the Colleges of Agriculture and Home Economics at Cornell for 22 years. Mr. Simons is a member of Epsilon Sigma Phi (national extension fraternity).

H. B. MUNGER '12, Byron, N.Y., was appointed by President Eisenhower in 1953 to represent Springfield, Mass., on the Federal Farm Credit Board. He served in that capacity for seven years, having had many years experience in farm management. He received the American Farm Bureau Federation Award for distinguished service to organized agriculture in 1944.

ORRIN M. SMITH '13, RD 3, Wolcott, N.Y., retired in 1960 as district Superintendent of Schools, Second Wayne County Supervisory District. He is a member of many community organizations and is Wayne County representative to the N.Y. State Retired Teachers Association.

THOMAS E. MILLIMAN '14, 203 North Triphammer Rd., Ithaca, N.Y., worked in farmers' cooperatives after more than two years as manager of a Long Island farm and four years as county agricultural agent. He says he belongs to virtually all of the state and national agricultural organizations, including several scientific societies.

J. CARL McKinney '15, Freeville, N.Y., worked as farm manager, assistant county agent, and with the U.S. Employment Service until 1928, when he rented and later bought a farm. Now retired, he is interested in a number of agricultural organizations.

MILTON B. PORTER '16, 2792 Dickersonville Rd., Ransomville, N.Y., has worked his family farm since graduation. He is an active member of many local farm organizations and has held offices in subordinate and Pomona Grange. Recently he entered a limited partnership on the farm.

BERT J. ROGERS '17, 42 M president and manager of the Farm Canton. He has worked for various cooperatives and operated a farm.

FRANCIS O. UNDERWOOD retied in 1959 as manager of the Farm Credit Cooperative. He was formerly an instructor and manager of the College of Agriculture.

W. S. STEMPTLE '19, 15 C American Breeders' Service. He was a member of the New York Agricultural Board and a member of the American Breeders' Service. He was an auditor of the Farm Credit Cooperative and a member of the American Breeders' Service.

FRANCIS J. OATES '20, Collins, a wholesale ice cream business, and a beef farm. His memberships include the Farmers Cooperative, the American Breeders' Service, and the American Breeders' Service.

HERBERT F. MARTIN '21, 10 Arizona, retired in 1962 after 41 years in the County, Mineola, N.Y.

DARWIN C. SMITH '22, Smith School District Clerk and Business Manager, 1955. He is active in many organizations and holds the peace.

JOHN C. HUTTAR '23, Rochester, and the Gloucester Exchange, Ithaca, N.Y., is assistant manager and a director of the Rochester Exchange. He has been a member of the Rochester Exchange since 1923 and a director of the Rochester Exchange since 1928.

PHILIP DORF '24, Newfield, history and biography since 1949, in the area. In 1959 he built a small "investment" in rural real estate.

MRS. ANNE SNITOW GLAS has been a guidance consultant for the seven years. She is the Second-rented and Cornill, and a member of the Co-operative Association.

EARL C. FOSTER '26, Retired, was formerly an assistant for seven years. He is the Second-rented and Cornill, and a member of the Co-operative Association.

T. E. LA MONT '27, Albion, farm since 1938, now in partnership with the former and Cornill, to join the operation upon graduation '61, is with them as engineer of the New York State Horticulture Branch of the New York Federal R
GILBERT B. HART '28, 510 Tioga St., Ithaca, N.Y., has retired as YMCA youth director, a post which he held for five years.

NORVAL G. BUDD '29, Shortsville, N.Y., has been with the GLF Exchange since graduation. He is the manager of the Grain Marketing Service in Canandaigua, New York, and has been a director of the National Federation of Grain Cooperatives.

PETER G. D. TEN EYCK '30, Indian Ladder Farms, Altamont, N.Y., is president of the Indian Ladder Farms and the TenEyck Insuring Agency. He is also a director of the National Commercial Bank and Trust Co. and a trustee of the Albany Savings Bank.

LT. COL. CARL A. DELLEGREN '31, 737 Warburton Avenue, Yonkers, N.Y., retired in 1961 from active duty with the U.S. Army. He formerly worked for the Ithaca GLF from 1932 to 1941. He spent 42 months in Germany and 16 months in Korea.

ELMA G. OSTER '32, Irving Place, Rockville Centre, N.Y., has been a school nurse-teacher since 1940 with one year in the Army Nurse Corp. She is a member of the New York State Teachers Association.

CLIFFORD E. LLOYD '33, Pine Bush, N.Y., has been teaching chemistry and geology for 10 years at Orange County Community College. He spent five years inventing rabbit fur lapping and hardening machinery for use in felt making. Mr. Lloyd is also a part-time farmer and gardener of 15 acres. He is a member of various professional and teaching associations.

ROGER W. CRAMER '34, Jamestown, N.Y., has been with the Extension Service for 29 years, working in Chautauqua Co. since 1943. Mr. Cramer is a member of the Grange, Farm Bureau, and has been president, director and secretary-treasurer of the New York State Association of County Agents. He has also been director of the Jamestown Rotary Club and a member of the National Association of County Agricultural Agents.

STEVE M. SMITH '35, Yorkshire, N.Y., is an agricultural consultant of western New York for the State Education Department. He has operated a farm since 1946. His son, Ed, is now a senior at Cornell and was the Swedish exchange student last year. Mr. Smith is active in many local organizations and is past president of the Kiwanis.

ALBERT WARREN BROMLEY '36, 183 Adams Street, Delmar, N.Y., has been employed by the New York State Conservation Department since his graduation. He is director of the division of Conservation Education, and former managing editor of the New York State Conservationist. His son, Peter, is a senior at Cornell majoring in vertebrate zoology.

JOHN A. MOTT '37, Hartwick, N.Y., operates a farm. In 1937 he started an agricultural department at Mohawk Central School. He is a member of several farm and photography groups. His son, Robert, is presently a senior at Cornell and his daughter, Carol, is a sophomore in the College of Home Economics.

RALPH E. KING '38, 25 Treleigh Drive, North Syracuse, N.Y., is a commercial accounts advisor with an insurance firm. He formerly worked for the St. Lawrence Co. Agricultural Conservation Association and for a bank in Canton, N.Y.

PAUL RAPPAPORT '39, 916 Oak Lane, North Woodmere, N.Y., is vice president and sales manager for Davidson-Adelphi Textiles, Inc., New York City, where he has worked since 1946.

RODNEY E. WOHLERS '41, 4987 Lake Road South, Brockport, N.Y., was fieldman for the Quaker Maid Division, A. & P. Tea Company, until 1960, when he assumed his present position as manager of the eastern field operations of Hunt Foods and Industries, Inc.

CAESAR J. COLUZZA '42, 1527 Taylor Avenue, Utica, N.Y., managed Coluzza's Restaurant until 1951. He was a milk and food inspector for New York State Department of Agriculture and Markets until 1962 when he was promoted to senior food inspector in the same department.

RALPH WORK '43, 864 Main Street, North Acton, Mass., who did undergraduate and graduate work at Cornell, is currently a soil scientist for the U.S. Department of Agriculture, Soil Conservation Service. A member of the Ho Nun De Kah honorary society while at Cornell, he is a member of Alpha Gamma Rho and several other organizations.
Dear Cornellians,

I hope the following summary of my first experiences in Argentina will be of interest to you.

One of the most fascinating events I have seen was the Rural Exhibition in Palermo. The exhibition includes every commercially raised animal in Argentina from mink to horses. The beef cattle are the best in the world, and the dairy cattle and sheep are close behind. After the judging, each animal is sold at auction. The chicken auction is usually an unruly event, but the beef cattle sale is famous for its high prices and champion bulls.

The auction pavilion was filled to capacity an hour before the beef sale began. The temperature soared, but the windows were painted shut. A representative of the administration solved the problem by smashing the panes. I don't know if the same thing happens every year, but I'm going back to find out.

After a long wait, the grand champion bull entered the pavilion, accompanied by nervous attendants adding a few finishing touches. The auctioneer read a long pedigree, and the bidding began at a million pesos. The sale was made four million pesos later, and amidst applause and picture-taking, the champion ambled back to his stall. Next, the reserve champion entered the ring, and the auction continued.

The large crowds at the exhibition are typical of the metropolitan enthusiasm for Argentine agriculture. Public interest has been created in part by the Sociedad Rural, the organization which sponsors the Palermo Exhibition. The image of rural life created by the show cattle and new farm equipment is very popular with the city dwellers. However, the average commercial beef operation isn't so glamorous.

In the past six weeks, I have lived at three estancias (ranches) and have learned much about the people and the country. While beef farms compare favorably with any in the U.S., dairy farms fall far behind because they lack electricity.

Having grown up on a tractor in the U.S., working on horseback with the cattle herds was a new experience for me. The gauchos carry long knives, for everything from cutting wood to notching calves' ears, and are always accompanied by a pack of dogs called galgos, which are used for rabbit hunting. A typical meal for a gaucho is four or five cups of tea, two pounds of beef, a pound of bread, a liter of wine, and cheese or quince jelly for dessert. The gauchos never tire of this diet, and rarely eat anything else, although many fruits and vegetables are available.

The people of Argentina, rural and urban alike, have made me feel at home in their country. I am having a wonderful time, and I heartily encourage all interested freshmen to apply for the exchange and to talk with Professors Hertel and Ward in Roberts Hall, and with Alberto Lesser, this year's exchange student from Argentina to Cornell.
THE PROCTOR:
MORE THAN DISCIPLINE

by Kenneth Goldstein '65

To many students the Proctor's Office is a place to avoid at all costs. Most students, however, are unaware of the varied functions of the office headed by Lowell T. George.

"In a school the size of Cornell, it is inevitable that there will be a few persons who have criminal tendencies. We feel, however, that students reported to our office are mischievous or misguided, and have no basic intent to injure society. That is how we gear our actions and our thinking," said Proctor George.

The office helps students who have problems which may result in legal or disciplinary action. The staff is always available to counsel a student on non-academic matters, and of the more than 3,000 students who were interviewed last year, over 1,000 came voluntarily. Many students have been able to keep out of trouble by bringing their problems to the attention of the office before they become involved with the campus patrol or other legal authorities.

Some students do, however, get into trouble and an investigation is necessary. Complaints may come from outside the University—city police, local merchants, landlords—or from within the University—other students, faculty members, Deans' offices, etc.

The most frequent concerns are theft, property damage, disputes between students, and missing students.

After a complaint is received, an interview is arranged with the student to inform him of the complaint and to give him an opportunity to present his side of the story. This enables the Proctor to reach a clearer understanding of the student's background, problems, and motives.

The same types of complaints are heard year after year, according to Proctor George. Freshmen seem to think their pranks are unique, but they can usually be easily predicted. Such pranks include sending in false fire alarms, throwing water bombs, making fraudulent telephone calls, and planning party raids.

"We have learned that unless these practices are dealt with promptly, they are likely to mushroom into troublesome epidemics," he pointed out.

"We strongly believe in prevention and spend a great deal of time trying to foresee trouble and take steps to prevent it, rather than wait until it happens and then have to apprehend the violators," emphasized Proctor George.

In working toward this goal, he has addressed meetings of the freshman men and women, pointing out the dangers of riots, which can lead to arrest and permanent police records. In addition, he has spoken at Inter-Fraternity Council and Pan-Hellenic meetings.

The Proctor's Office also arbitrates between landlords and student tenants. Instances might involve misconduct in rooming houses, non-payment of rent, or failure of either student or landlords to fulfill the contract. The office seeks to hear both sides and attempts to get the parties to reach a mutual understanding. If this fails the matter may be referred to an arbitration committee consisting of the Assistant Dean of Students, a student representative, and the Proctor.

In the event of an auto accident, the Proctor's Office, which is notified by either the infirmary or the police, investigates and assists the student in preparing and filing accident reports. The office also advises the student of his rights and responsibilities. If necessary the Proctor will appear in court with the student.

"I think that it is especially significant to mention that out of this great number of young men and women, only a small percentage become involved in what could be described as serious offenses. The majority of students conduct themselves in exemplary fashion at all times," concluded Proctor George.
In Russia today, certain children are learning to dress themselves at the age of 18 months.

By this age, the youngsters have completed toilet training. They will begin occupational training in the first grade and are expected to turn out consumer products by the time they reach the upper grades.

These and other startling developments in child rearing and education were observed in Russia during the winter and spring of 1963 by Professor Urie Bronfenbrenner of the College of Home Economics at Cornell.

These children were attending institutions known as "schools of the new type," according to Professor Bronfenbrenner, exchange scientist to the Institute of Psychology in Moscow. He reported that the children are placed in collective groups at infancy and encouraged to organize for classroom procedure.

Professor Bronfenbrenner said he visited a school in which the idea of a children's collective was in operation.

Children from three months to seven years are placed in a combination nursery-kindergarten where training begins within the first year.

Professor Bronfenbrenner noted that the schools provide early experience in collective living by placing the children in group playpens.

Each child, he said, undergoes a series of reinforcement schedules under the guidance of an upbringer. During this stage, the children are encouraged to respond to bright objects and to discriminate pitch, timbre, and other musical elements.

One of the major features of this new system, as outlined by Professor Bronfenbrenner, is the early withdrawal of the upbringer from the children's lives.

The youths are expected to adhere to the collective system and manage their own affairs. Encouragement for this independent spirit in the young Russian's life is based upon competitiveness. Professor Bronfenbrenner said that the teachers typically never give rewards or punishments to individuals but rather to groups.

A group's control of its members is increased with a corresponding decrease in interference by the teachers as the students enter the upper grades.

Classes are run by the students themselves in many cases, Professor Bronfenbrenner observed. In one class, a girl was seen solving a geometry problem while another member of the class evaluated her work. Both were graded on their performances. The same sort of group control is reportedly exercised outside of the classroom as well.

Each class has an officer who meets with other class officers regularly to review the behavior, achievements and shortcomings of each of their classmates in all spheres of activity—schoolwork, personal habits, extracurricular activities, assigned housekeeping duties, and moral conduct both in and out of school. A final evaluation is given to the parents, who must sign the report and return it to the central group. This committee also undertakes remedial and disciplinary measures.

The result of collective upbringing seems to be a well-behaved, industrious child. "In their external actions," Professor Bronfenbrenner reported, "they are well mannered, attentive, and industrious. In informal conversations, they reveal a strong motivation to learn, a readiness to serve their society, and—in general—ironically enough for a culture committed to a materialistic philosophy, what can only be described as an idealistic attitude toward life."

Observations are not complete enough at this time to give any indication of what the students will be like as adults, he concluded.

Undergraduates in the College of Agriculture at Cornell received more than one-half million dollars in scholarships and financial aid during the 1962-1963 school year, according to Professor J. P. Hertel, Secretary of the College.

About $350,000 of the total was in state scholarships, administered by Cornell University and from scholarships and loans available to students through the University and payable after graduation at nominal interest rates, he said.

Professor Hertel stated that the total University figures for the 1963-64 school year would not be available until next June, but the 175 scholarships from the College of Agriculture for 1963-64 total $61,925. Next year's financial aid total should be even higher, Professor Hertel commented. Now that tuition is charged, all New York State residents are eligible for scholarship incentive awards of $50 to $150 per term, he added.
Miss Mildred F. Wilson of 319 North Tioga Street, Ithaca, director of the cataloging division at Mann Library, retired September 30 after 38 years at Cornell University.

Miss Wilson received her B.A. and M.A. degrees from Cornell and library training at Columbia University School of Library Service. She taught English to foreign students' wives for five years at the International Friendship Center in Ithaca.

Miss Wilson says her retirement plans are indefinite but she expects to winter in Florida and hopes to travel in Latin America.

Mrs. Lois W. Fish was appointed assistant state 4-H Club leader and assistant professor in Extension. She comes to Cornell from Syracuse University where, since 1961, she served as chairman of the home economics education division of the College of Home Economics.

Daniel G. Sisler, assistant professor in agricultural economics, recently received recognition and an award from the American Farm Economic Association as the author of one of the three outstanding Ph.D. theses on agricultural economics in the United States last year. Sisler was recognized for his thesis entitled “Direct Production Payments in the Feed-Grain-Livestock Sector of American Agriculture,” which was presented to the Cornell Graduate School in 1962.

Dr. Herrell DeGraff, former professor in the Graduate School of Nutrition, recently was elected president of the American Meat Institute during the organization's annual convention in Chicago.

Dr. DeGraff was a member of the Cornell faculty for 25 years, leaving in 1962 to join AMI.

Farmers in western New York and the Hudson Valley this year are expected to obtain a longer growing season for McIntosh apples because of the work of Professor L. J. Edgerton, College of Agriculture pomologist.

Through his studies, 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) has been cleared by the U.S. Department of Agriculture. The compound regulates growth to keep the apples on the trees while the fruit matures. Professor Edgerton claims there is no residue problem.

He says that this product has advantages over similar items currently in use. It controls harvest drop longer and does not hasten ripening.

Approved only for McIntosh apples, the compound is being applied by spraying rigs on the ground and by airplanes.

Prof. J. K. Loosli, head of the animal husbandry dept., told the first World Animal Production Conference in Rome, Italy, that the average dairy cow has a potential for producing double the milk she is now producing. He said, "The combined effect of genetic ability for high milk production, efficient management, effective disease control, and liberal feeding of balanced rations has enabled many dairymen to achieve herd averages of 16,000 pounds of milk and 590 pounds of butterfat or more for 10 month lactations. . . . The potential for maximum milk production is certainly more than double these present values."

Daniel Sisler

Economic development of agriculture in low-income countries is the concern of two professors named to the agricultural economics staff. Solon L. Barraclough was appointed professor and Thomas T. Poleman Jr., assistant professor, as a result of a Ford Foundation grant supporting the training of U.S. and foreign students for work in international agricultural development. Barraclough, who comes to Cornell from the Food and Agriculture Organization of the United Nations, has served as agricultural economics adviser to Lebanon for the U.S. International Cooperation Administration, and as expert in land economics to the Chilean government for the F.A.O. Poleman has been a professional associate with the National Academy of Sciences; research associate of the Food Research Institute, Stanford University; and a senior economic analyst for the federal government.

Three Cornell faculty members participated in a scientific program of the Sixteenth International Congress of Zoology in Washington, D.C. Prof. David Pimentel, entomology, reported on "Natural Population Regulation and Interspecies Evolution," Prof. J. M. Anderson, zoology, took part in a symposium on "The Physiology of Echinodermata," and Prof. Charles G. Sibley, zoology, reported on "New Techniques for Systematics."
ADVANCE AGAINST APATHY

by Michael Whittier '65

Take 150,000 people across the state who are interested in community affairs and organize them into small groups on the local level. Supply them with information about public issues and let them discuss these issues.

What do you have? Operation Advance for 1964.

Operation Advance is a project of the Cooperative Extension Service at Cornell University and the County Extension groups.

Two of the many people providing leadership for Operation Advance are Gordon Cummings, associate professor of rural sociology at Cornell, and Nicolaas G. M. Luykx II, assistant professor of agricultural economics. Professor Cummings said the purpose of the program is to help people better understand public issues as a basis for taking more effective action on them.

Because each group of about a dozen people will reflect a broad cross-section of interests (educators, farmers, labor leaders, businessmen, lawyers, and government employees), there should be opportunity for "give and take" in discussion. Professor Cummings and his associates think that this is the key to the success of Operation Advance—it helps people become aware of others' viewpoints. This awareness forms a base upon which they can build better understanding of community problems.

What problems will be discussed in the four weekly meetings next February? Four main topics are slated for consideration. They are: "Community Growth and Development," "Education and the Future," "Resources—Land, Water and People," and "Amidst World Problems."

The Cooperative Extension Service has set up Operation Advance so that it is available to the general public. County extension agents organize and administer the program on the county level. Next February it is expected that 150,000 people will participate statewide in the four weekly meetings.

Professor Cummings explained how the discussion groups are organized. The first step is finding a person interested in forming a small group. Following that a discussion leader must be found. He volunteers for the task and will attend a training meeting before February. His job is to guide the interchange of conversation, not to tell people what they should think.

Discussion sheets will be made available to the participants before the sessions. These sheets deal with the problems facing most communities today—both urban and rural. Then the participants will discuss the information on the sheets and use it to study their own local problems.

The four topics in the series represent major problems facing most people and communities in New York State, according to Professor Cummings. Urbanization is a central theme in the discussion topics, and serves as a thread to tie them together.

Starting with "Community Growth and Development" the participants will discuss how urbanization affects demands for services, employment, transportation, industrial location, and education.

Under "Education and the Future," adequacy of schools and the quality of education will be considered.

"Resources—Land, Water and People" focuses primarily on what to do with land no longer useful for agricultural production.

The topic "Amidst World Tensions" deals with problems of national and international importance such as foreign trade, foreign policy, and the cold war, in relation to their effects on New York State communities.

Each main topic will be of some interest to those participating in Operation Advance. Professor Cummings said it is hoped that the people involved will learn to recognize what changes are needed in their communities, and will be able to help leaders initiate effective public action. To the extent that Operation Advance achieves this goal, it will have been successful.
Everybody’s heard of suburbia. Lots of us even have opinions about it as a way of life. Some of us know that the cities are losing people every day, and that rural people are giving up farming and moving to the suburbs and cities. Few of us know how great these shifts have been recently; and somehow we never include ourselves in the lengthy statistics of population change.

But in the long run, these seemingly remote shifts have been caused by nothing more than the total effect of all the small decisions we have made every day. Did we decide to try ready-prepared vegetables instead of fresh ones? Did we choose an imported food over a local one? Maybe we bought a nylon dress rather than a cotton one. Or maybe we decided to save a little each week toward a down payment on a house in the suburbs.

All these decisions affect the farmer, just as his changes in production methods affect what we buy to eat. But since a small number of farmers provide food for such a large number of people, it follows that farmers are more directly affected by decisions made in the cities and suburbs, the places where most of the nation’s people live. That’s why institutions like Farm-City Week are so important in closing the breach in understanding between farmers and city people.

Let’s look at some of the shifts in New York State to see how they affect these two groups. New York has 17½ million people. Three and a half million of them live in the suburbs. That’s 100 percent more than in 1950. The number of people living in the country, but not on farms, has grown by 35 percent since 1950. But the farm population has dropped about 43 percent since that time, leaving slightly under 2 percent living on farms.

Today’s farmer is producing five or six times as much food as his grandfather did. He can do this because science has helped him. Yet the technological revolution in agriculture has been the very cause of farmers’ going out of business. The increased competition between farms that was brought about by technological change has caused more than 11 million acres of New York cropland to be dropped from production in the past 60 years.

Rapid changes in people’s tastes also affect farmers. Today, people want low-fat milk and lean-type hogs. They choose processed foods and dietary liquids. Synthetic fibres are still competing with natural ones, and oleo-margarine manufacturers wage war daily against “the more expensive spread.” Competition from new areas both in this country and abroad is another factor. New York tomato, potato, broiler, and egg producers have faced this kind of competition recently.

In an effort to stay in a good competitive position, farmers have begun to use goods and services that speed up their operations. Many goods such as chemicals, drugs, and machinery, and services like printing, packaging and advertising, come from the city. The average New York State vegetable farmer buys from 204 different sources, and sells to 106 different outlets in one year.

The point is that the tougher the competition gets, the tighter the ties become between farm and city.

These are not ties of desperation, but of cooperation. Farm needs have set in motion a whole complex of jobs, people, and money, a complex now known as agri-business.

City dwellers are increasingly dependent on rural areas for things other than food. More and more of them work in agri-business. Many others simply seek recreation. Now that almost every family has a car, and every state a super-highway, the country is more accessible. And people are flocking to the country for recreation. They are moving to the suburbs, too, or to rural villages and small towns. Once there, they become concerned with lawns and shrubs, vegetable gardens and mole damage. They have been discovering and making use of the State Extension Service for help with their problems as homeowners.

New life is being injected into the rural areas. Unproductive farmland that has lain fallow for years is being converted to recreational uses. Old abandoned farmsteads are being rebuilt by the newcomers.

This healthy trend toward greater interdependence can easily be slowed by a lack of mutual understanding. The suburbs, as an example, are composed mainly of people who once lived in the city. The values of these people are essentially city ones. Continuing efforts like the ones involved in Farm-City Week will help to overcome any misunderstandings that may exist.

Farm-City Week will be held from November 22-28 this year. New York’s Farm-City Committee hopes to focus attention on farm activities, and show how increased productivity on the farm contributes to the growth and improvement of business and industry. People in New York and across the nation will take part in local activities planned by the many organizations affiliated with Farm-City Week. Fittingly, they will end the week on Thanksgiving Day, a day that symbolizes the bounty of the farm, a bounty shared by everyone.
Last Year, **strike** Fed Millions of Lively, Healthy Trout

Trout like Strike. State, federal and commercial trout hatcheries throughout the eastern half of the nation prefer Strike, too. GLF's experience in formulating fish feeds and integrity in the feed business has made Strike one of the most popular fish feeds in the eastern United States.

Strike is fresh. It's shipped directly to you with no intermediate warehousing. Your fish get full vitamin potency and palatability. Pellet size is just right, too, to encourage your fish to strike quickly. And Strike settles very slowly so your fish have plenty of time to eat it.

Call or write us today and let us show you how Strike can meet your feeding needs surely, and economically.

**STRIKE**
GLF Small Animal Foods Dept.
Waverly, New York
IN THIS ISSUE

1903-1963: The Countryman's Change of Pace .............................................. 2
Interest and Service, the Constant Policy of the Countryman ............. 4
New York Agriculture: A Changing Scene .................................................. 6
Swedish Exchange Student Comments on Classes and Christmas .... 8
The 4-H HAT .................................................................................................. 9
It's a Long Way Down ................................................................................... 10
Countryman Capsules .................................................................................. 11
Having Problems ??? ................................................................................... 12
Alumni .......................................................................................................... 13

Staff

Editors-in-chief ......................... Toni Gailey '65 and Frank Fee, Jr. '65
Managing Editor .............................. Jay Brodell '64
Circulation Manager ...................... Anthony Sinopoli '64
Librarian ................................................................. Mike Whittier '65

Freshmen: Marjorie Case and Donald G. Semmler.

Sophomores: Rita E. Caputo, Lucy R. Fischer, Robert E. Fistick,
Manning Gasch Jr., Peter P. Heilemann, Lois M. Herrmann, Linda H.
Jensen, Margaret G. Jensen, Conan A. Mooney, Candace Moore, and
Robert W. Wood.

Juniors: Kenneth S. Balmas, Francine Grace, Kenneth Goldstein,
Susan E. Isler, John Paul Lowens, Peter L. Monnier, Wade M. Nye,
Renate E. Rabler, Owen C. Wavrinek, and Rochelle Yedvab.

Senior: Richard Heinrich.

The Cornell Countryman is published monthly from October through May by the
New York State College of Agriculture, 490 Roberts Hall, Cornell University,
Norton Printing Co. of Ithaca. Subscription rate is $1.75 a year or two years for
$3.50; three years for $4.50; single copies, 25 cents. A member of Agriculture
College Magazines Associated. Represented for national advertising by Littell-
Murray-Barnhill, Inc., 369 Lexington Avenue, New York 1, N.Y.
Farm equipment lives up to its design with the extra strength and endurance... the extra HARVESTPOWER of Link-Belt chain.

HARVESTPOWER to spare! It's built into every strand of Link-Belt chain. Extra capacity to withstand starting, shock, and dynamic loads... to provide the trouble-free transmission of positive power at that all-important time when it's really needed... season after season.

The superior HARVESTPOWER of Link-Belt chain is a result of many manufacturing refinements. These processes—which go beyond ASA dimensional standards—add up to chain that excels in strength and durability. Today, over 300 farm machine manufacturers are taking advantage of the extra measure of HARVESTPOWER built into Link-Belt chain.

Link-Belt offers industry's most complete line of drive and conveyor chains, chain attachments and sprockets. Also "bonus" services: application counsel, field analysis, laboratory service and others. These services multiply the value of Link-Belt chains, but not the price!

**LINK-BELT**

**CHAINS AND SPROCKETS**


---

double-pitch agricultural roller chain
standard roller chain
steel replacement roller chain
steel detachable chain
In the spring of 1903 a group of students in Cornell's College of Agriculture decided to publish a mimeographed bulletin about agricultural trends. After a series of discussions they decided on a monthly magazine, to be titled Cornell Countryman, and the present magazine was on its way.

The following fall when the staff organized for its first issue, George F. Warren became the first editor, in lieu of Albert R. Mann, who had left Cornell to take a job with the Cyclopedia of Agriculture. It was Mr. Warren who, in the first issue, set the aims of the Countryman:

"It is not our purpose to enter the field so well filled by the many excellent farm papers; but rather to appeal to the student of agriculture, be his work in farming, teaching, or investigation. In the Cornell Countryman we hope to voice the best in agricultural progress and agricultural teaching. We will present articles that deal with the larger problems of country life, the economic and social conditions, the rural school, and the farm home. The results of scientific investigations and general agricultural news will be given prominence. Special attention will be given to news of former students."

Throughout the years this policy has been the continuous goal of each staff.

The early issues of the Cornell Countryman were somewhat anti-urban. This was clearly evident in a 1904 poem by Memnon:

"Urbs in Rure"
I'm glad you city-people
Love the city as you do
For if you should desert it
You would spoil the country too.

In the April 1907 issue an editorial brought forth strongly this singleness in pride:

"It has been said that the College of Agriculture is the most enthusiastic at Cornell. It would be remarkable if it were not. We have more to be proud of than most colleges; for the College of Agriculture is alive and it is through that life that the future will open for the students."

As the years progressed, the Countryman changed from the completely rural aspect to some articles also directed towards the urban dwellers. In November 1916, "Green Things for City People" was run along with regular features for the home.

In 1922-23 financial problems began to show. The Countryman had to decrease from 56 pages to 28 pages due to the lack of support from advertisers. To save expenses, the staff omitted the editorial page, and used fewer pictures, replacing them with pencil or ink sketches. Also, to partially overcome financial pressures, the Countryman joined the Agricultural College Magazines Associated, which was organized to exchange ideas and pool national advertising.

At this time also, the articles were of a more general tone. In January 1924, D. P. Witter, a New York State legislator, contributed "One Hundred Years of Agricultural Legislation in New York State;" Liberty Hyde Bailey wrote "The Farmer's Position," concerning the agricultural depression of the 1920's. Professor Louis M. Massey wrote "Plant Pathology Investigation." In 1925, Albert R. Mann reported on "Some Agricultural Observations in Europe," and George F. Warren, who had been the Countryman's first editor, gave an extensive representation of farming policy in "The Agricultural Situation." These set a precedent of general rural and campus topics, in-
The Countryman’s Change of Pace

by Renate Rabeler ’65

cluding the addition of the football schedule. With this breakthrough, a series of articles on foreign agriculture followed.

This policy of having a generalized magazine was further enhanced under the editorship of John P. Her- tel, now secretary of the College of Agriculture. The Countryman had very few articles on agriculture that year, but many of general interest to the entire campus. At this time another policy was developing—the undergraduates were writing the majority of the articles.

The Depression hit hard with the 1934-35 issue. The Countryman had one of the largest staffs ever, but no excess of money. The October issue had only ten pages with very few illustrations. Advertising fell to an all-time low of only two-and-a-half pages. One half page was accounted for by the College of Agriculture. To save expenses the quality of paper went to newsprint—but the magazine continued. That spring, to economize further, the March and April issues were combined into one eight page magazine, and the college came through with one page of advertising.

The Countryman revived the next year with an average of 16 pages an issue and the following year Julia Bockee became the first woman editor of the magazine.

The next feature of the Cornell Countryman was during World War II. Volume XLI began with the November issue instead of October and the cover was red, white, and blue: red type, blue photograph of a group of servicemen in front of the statue of Andrew Dickson White, and white cover stock. The aims of the magazine were in editor Betsy Kandiko’s editorial:

“Our Part”

The Countryman cannot go to Guadalcanal and shoot Japs. But we can do our best. Maybe we can cheer you up once a month with our light features; maybe we can make wartime living a little easier by passing along what our home economics and agricultural experts are working on. Maybe we can bring college back to those of you who have had to leave; maybe our part will be worthwhile.

Then we can stand before Uncle Sam and say: “We helped too.”

In 1955 the Cornell Countryman increased its circulation by sending complimentary subscriptions to New York State public high schools and county agents; free magazines were also distributed on the upper campus for students. The costs for these came from the College of Agriculture and advertising revenue. Expenses mounted however, and the Countryman went into debt.

The situation became worse in the following years and the magazine was faced with a critical situation. In February, 1963, Paul Roman, editor, stated: “The Cornell Countryman presently is facing one of the most critical problems of its history . . . the magazine is suffering from an inadequate staff, a weak financial base, and a chronic lack of support from the student body.” He made the following recommendations: “That the responsibility for the operation of the Cornell Countryman be assumed by the department of extension teaching and information, and that the department staff the organ with students majoring in agricultural journalism.”

The administration of the College of Agriculture used Paul Roman’s recommendations, and the agriculture journalism majors, under the guidance of the department of extension teaching, now comprise the Cornell Countryman’s staff. In this way each student has the opportunity to earn his 13 hours of specialized practice credits during the school year instead of obtaining them through summer jobs. Since there is a policy of rotation on the staff, each student will have had the editorship of an issue at least once in 4 years.

Over the years the students’ work on the Countryman hasn’t gone without merit. In 1941-42, Sigma Delta Chi and Pi Delta Gamma presented the staff with the best feature article award. Farm Journal awarded The Countryman the 1st place certificate in 1948 for general excellence, while Successful Farming presented plaques for Cover Awards in 1959 and 1961. On several occasions the honors for carrying the best material of interest to women were acknowledged by the Country Gentleman, Capper’s Farmer and the associations for Prairie Farmer, Wallaces Farmer, and the Wisconsin Agriculturalist. The staff is also proud to say that they received several letters of commendation from accredited people in the journalism field.

This magazine that you have before you, and the future ones, are under the above policy. The staff is grateful for being able to continue the tradition of 60 years of service that the students started by publishing the first Cornell Countryman in 1903.

Many of the facts used in this article were collected from “The Cornell Countryman—An Illustrated History,” by Jill Beckoff.
“Turns easily, washes easily, has a waist high supply can, needs little oil, and requires practically no repairs.”

What could it be? Sounds remarkable! Actually the above description was part of an advertisement for a tubular cream separator which appeared in the first issue of the Cornell Countryman in December 1903.

A glance through the Countryman’s first issue shows us that the goals of 1903 were surprisingly “modern.” Liberty Hyde Bailey, first dean of the College of Agriculture, was one of the contributors to that first issue. His article, “The Outlook for Agricultural Teaching,” expresses part of the philosophy that governs the College today:

“This, then, is the burden of the new agricultural education—to reach the agricultural people in terms of their daily lives, to the end that their lives may be fuller and stronger.”

Another article in the December issue revealed the College’s concern with community service. Martha Van Rensselaer described one of the College’s novel services in “A Reading Course for Housewives.” Although women still could not vote in national elections, they played a vital part in local affairs. As early as 1903 the College of Agriculture was cognizant of the importance of women’s rights and education.

The Countryman’s first issue had many of the same features that you read today. Aside from the articles of general interest and those concerning specific agricultural areas, there were campus and agricultural news briefs. They provided information about the activities on other campuses and on our own. This was the forerunner of today’s “Countryman Capsules.” Another regular feature in the first issues that has carried through to today was the “Alumni News,” under the heading of “Former Students.”

Interest and Service, Constant Policy of the Cornell Countryman

by Francine Grace ’65

As one looks through that first issue it all appears very familiar. But when I got to the end, something was different. The last section of the magazine was devoted to advertising. There were ads for silos, trees and shrubs, cotton seed meal, and of course, the tubular cream separator. This is something you won’t find a lot of in this issue, for we are not dependent upon advertising as the first staff was.

As you have seen, our goals have not changed radically over the past sixty years. Our basic structure is the same because it has proven to be the best suited to our purpose, to be of interest and service to a greater number of people. Like the College of Agriculture, whose outlook and activities have broadened, we are no longer confined to the farm, but have branched out into industry, research, and other general interest areas. Today the College is sharing its experience and knowledge with many nations and is being richly rewarded by its contact with them. To keep pace with this expanding sphere of influence, we have tried to present a more cosmopolitan face to our 1903 readers. Today’s readers are living everywhere from the Philippines to the Cornell campus, and are doing everything from research, to farming, to studying for exams. But like the December issue sixty years ago, our main goal is still to be of interest and service to a greater number of people.
Assignment: make our gasoline make engines run better while they're still on the drawing board.

Engines of the future... engines of today. Low compression engines... high compression engines. Air-cooled engines... water-cooled engines. Four, six and eight cylinder engines. And all he has to do is figure out which gasolines we should produce to make them all happy.

One of the key scientists in American Oil's Road Anti-knock Quality Program is Charles Karabell, 31, B.S., Chemical Engineering, PhD, Mechanical Engineering from Purdue University. To say that his job of establishing and predicting fuel characteristics for today's and tomorrow's automobile engines is a challenge, is a vast understatement.

If you're thinking about a career with a future, think about us. American Oil offers a wide range of new research opportunities for: Engineers—chemical, mechanical, and metallurgical; Chemists—analytical, electrochemical, physical, and organic; Masters in Business Administration with an engineering (preferably chemical) or science background; Mathematicians; Physicists.

For complete information about interesting careers in the Research and Development Department, write: J. H. Strange, American Oil Company, P. O. Box 431, Whiting, Indiana.


AMERICAN OIL COMPANY
If some of these pictures had appeared, the story might have been indicative of the great changes in New York agriculture over 60 years.

Time was when the farmer labored to provide enough food for eight of the city's residents from dawn to dusk. Things haven't changed much in New York. The Farmer is now feeding over 30 million people. The enormous quantity of food produced by the smaller labor force is only part of the story. Certified seed, guaranteed for purity and uniformity, and faster transportation as well as the use of modern harvesting equipment permit bigger yields of high quality produce that reaches the consumer's table. Inspection and certification awareness by consumers also increases the quality of the products.

Milk production, which is one of the most noticeable changes, shows the impact of change most dramatically. Breeding stock provide better animal performance. Artificial breeding produces stock faster than natural breeding. Milking machines have been in use recently that milk has been produced in large quantities.

Bulk milk has made such an impact on handling ease and lower processing costs, that many farmers' lives will no longer be the same. Milk has even been delivered to the consumers' doors in ten-minute delivery time. This has been a great change from the small farm, unhygienic conditions that have persisted for many years. The change from the small farm and the terrible conditions has certainly rest easy knowing that he does not. Consumers are assured that the milk is processed in sanitary dairies and handled with all health regulations.

On the retail level, current Coast Milk in bulk at the local grocery store, by the ladle, in 1963, would quickly dry up. Similar changes have occurred in crop production. Mechanical harvesters have replaced the old methods, and just about every other phase of the farm is mechanized. As his city's counterpart. Electric, gas, wood, and coal. Almost every farm has facilities to ease the life of the farmer.

The change in agriculture has been noticeable over short periods of time. As on these pages, that it is so different today. Agriculture will continue to appear as ghosts of the past.
Changing Scene
by John Lowens '65

red in the first issue of the *Country-*
ed science fiction. Today, they are...
"Classes and Christmas Different In Sweden"

by Lois Herrmann '66

"Studying at Cornell is certainly different—at home, we don't have such frequent quizzes," says Ingvar Mattsson, an exchange student from the Royal Agriculture College of Sweden in Uppsala. "Instead, we learn material at our own rate, and ask for an exam, which is usually oral, when we feel ready." The Royal Agriculture College offers only basic science and agricultural courses, however, and Ingvar would like to see other subjects integrated into the curriculum. He is impressed by Cornellians' privilege to elect subjects in the University's various schools.

Ingvar describes the Royal Agriculture College as "an independent institution with an enrollment of 350, and a four and a half year course of study." Having Cornell exchange students on campus "added a special touch to campus life, and getting to know them made it easier for me to adjust to Cornell." The other half of the Exchange Scholar Program, Carl L. Eisenhard '65, is now studying agriculture in Uppsala.

When Ingvar first came to Cornell, he felt "like a plant picked up and put down in a totally new environment," but now he is more at home, and is learning how Americans live and think. Ingvar plans to do public relations work for a Swedish agricultural firm, and feels that the proficiency he is gaining in English plus the preparation he is getting from agricultural economics courses at Cornell will benefit him greatly.

"The Cornell campus is marvelous—a nice mixture of new and old," says Ingvar. "The students seem mature, interested in their studies, and are very friendly toward foreigners." The men are younger than their Swedish counterparts, he notes, for "in Sweden we graduate from high school later, and must take care of our military service before entering college."

Ingvar plans to see as much of the United States as he can before returning to his home in Stockholm at the end of next summer. He will visit Washington, D.C. at Thanksgiving and is eagerly awaiting the opening of the ski season to try out New York's ski trails. Ingvar will spend Christmas traveling to Pittsburgh, Cleveland, and Chicago as a second bass with the Cornell Glee Club, but the report below tells how he would celebrate the holiday at home.

Christmas in Sweden begins on December 13, the day with the longest night of the year. Before sunrise on Santa Lucia Day, a girl from each family dresses in a long white gown and a crown of candles. She carries coffee and special breads to the family while singing a traditional song. Boys of the family, also dressed in white and carrying starred wands, join her to form a procession. The candlelight procession walks from house to house, bringing tidings of Christmas and symbolizing the light which will return after weeks of winter darkness.

The next big event of the Christmas celebration comes on December 24, when the family sits down to a huge smorgasbord at 2:00 in the afternoon. The climax of the dinner is a special rice pudding. Before the pudding is served, everyone recites an original humorous poem. The pudding traditionally contains a single nut, and the person who receives it will get married the next year.

Christmas Eve is spent around a decorated spruce tree waiting for the arrival of Jultomte, the Swedish Santa Claus. Like his American counterpart, Jultomte is a jolly old man with a white beard and a red suit. After gifts are distributed, the family sings Christmas carols and dances around the tree.

Christmas Day church services are held from 4:00 to 6:00 a.m. Families drive to church in horsedrawn sleighs, and later, local contests are held to find the fastest horses. A round of parties and dances ends the Christmas celebration on December 26.
THE 4-H HAT:

Honor Award Trip
to be made by
Superior Club Members

by Donald Semmler '67

On Tuesday, December 18, 1963, about 45 of New York's top-ranking 4-H Club members will converge on the Henry Hudson Hotel in New York City. These members have been sent by their respective counties to participate in the Eighteenth Annual Honor Award Trip (HAT). While in New York City, they will spend their time sightseeing and exploring new career opportunities.

The Honor Award Trip was started as an annual affair by Professor Robert Ogle in 1946. Upon Professor Ogle's retirement in 1953, the project was taken over by Professor Edward A. Schano, Cornell's 4-H Club poultry specialist. Originally, the trip was an award for outstanding poultry club members, but now it includes any 4-H member who excels in agricultural work in his county.

The length of the trip and its emphasis have also changed. It now lasts four days and emphasizes job opportunities as well as sightseeing. This new focus on exposure and introduction to new career opportunities has been developed by Professor Schano. He hopes that the delegates will become acquainted with many interesting careers, both agricultural and non-agricultural.

Most New York counties participate in the program, and sponsor a delegate to the HAT. Chaperones are chosen from three or four counties and are usually county agents or outstanding 4-H leaders. There are about fifteen chaperones each year, and they are usually assigned three delegates each.

Costs are met by the individual, the county from which he is sent, and other sponsors. The sponsors include Wirthmore Feed Company, Marshall's Hatchery, Babcock Hatcheries, Sears-Roebuck Foundation, some private sponsors within the respective counties, and those establishments and organizations, like the Henry Hudson Hotel, which perform a function in the course of the trip.

On Tuesday, December 18, delegates and their chaperones will register at the hotel and officially begin the program with the Sears-Roebuck Careers and Opportunities Banquet. The banquet serves as a formal orientation. Later, the party will see the Christmas Show at Radio City Music Hall.

Early Wednesday, delegates tour the Fulton Fish Market and eat at Sloppy Louie's. Afterwards, they board the Staten Island Ferry for a view of the Statue of Liberty, followed by a tour of the United Nations. After lunch at a Horn and Hardart Automat, delegates will spend the afternoon at the Hayden Planetarium and the Museum of Natural History.

Arising early Thursday morning, everyone will attend the Town and Country Orientation and Breakfast at 5:45 a.m. Later, the itinerary includes tours of the Butter and Egg Market, The North American Poultry Cooperative, The Mercantile Exchange, and The Ahler Brother's Processing Plant. After lunch at Schraft's a visit to the Empire State Building and to the New York Stock Exchange round out the afternoon.

The Farewell Breakfast is held in the Chart Room of the Henry Hudson Friday morning. A tour of the Queen Mary follows, and the trip ends officially at noon.

Throughout the trip, Professor Schano will point out career opportunities. Many professional men, experts in their fields, will address the group on career opportunities such as financing, distribution, processing, transportation, advertising and promotion, sales storage, and pricing.

The trip will be a memorable event in the lives of the delegates, and may even influence the future of some of them. Professor Schano hopes that the trips mean more than just an award, and considers his time well spent on these yearly projects. He allows free time in the schedule for delegates to follow their own interests, but everyone stays busy and is well behaved. “I’ve never had an incident of any sort,” Professor Schano said in praise of the delegates. “This demonstrates the quality of those participating.”
You crouch in the cockpit of an airplane, 2500 feet above the ground. There is no door on the single-engine Cessna so the wind screams in your ears as you scan the patchwork of green and brown far below. It seems incredible to be waiting for a command that will send you hurtling out into space.

"Cut!" The veteran jumper behind you barks the command you have been waiting for. As the pilot cuts the motor, you dangle your legs from the open doorway. You are careful not to look down. Nerves and muscles are tense; you give a long last look to the static line—this will open your chute automatically. It is secure. "There is no stopping now," you tell yourself. "You're really going to jump."

"Prepare to go!" There is no refuge in the jump-master's voice, only authority. Automatically your body moves out the doorway.

"Go!" The wind tears at your jumpsuit as you frantically clutch the strut of the wing. You echo his command to your body, "Go!" Hesitation. "Go!" You tell it again. Weakly your body obeys the incredible command, and it pushes out into the broad chasm of space.

"One thousand one." You dimly hear your own voice, as the aircraft seems to drift farther and farther away. "One thousand two." You think of dreams where you have fallen and of steep dips in a roller coaster. You feel suspended on a cushion of air, but you can see the trees rushing up towards you.

"One thousand -.-.", there is a gentle yank, and you look up. Above you, yards of orange and white nylon billow like a gigantic flower in bloom, and your parachute is checked. You finally relax. As you swing from your floating perch you shout to yourself, "Well, you've done it. You're a skydiver. You're really a skydiver."

That was my first encounter with skydiving, a sport that is rapidly sweeping the nation. But I was wrong about being a skydiver. I was only a fledgling who had briefly stretched his wings. A real skydiver is one who dives in free fall for thousands of feet. He waits up to 75 seconds before pulling the ripcord that will release his parachute. While falling he uses his arms and legs, much like the rudders of an airplane, to go in every direction but up. He can glide, loop, turn, and even shoot across the sky at speeds up to 120 miles per hour. Many say that the skydiver is the only human being who has truly realized man's age old dream of flying.

Cornell's Stuart Goldberg is a real skydiver. A first year student in the Law School, Stuart has made more than 100 jumps. He loves to talk skydiving. "You want to know why I jump?" he asks. "I jump for the thrill of the sport. The greatest thrill for me," he says, "is the exit from the plane. It is an amazing experience to actually dive out that door into a mile or so of open sky."

But Stuart Goldberg is no daredevil. "Safety is a main factor in this sport," he will tell you. "It's no fun to take chances with your life. The equipment, the personnel involved, the weather, and the drop zone must all be perfect." When those conditions are met, skydiving is safer than driving a car.

Parachutes Incorporated operates two of the largest parachuting centers in the United States. They have safety records that would be the envy of any large ski resort. Of thousands of novices who learned skydiving at these centers, only one in 500 have been injured. There have been no fatalities.

There is a growing number of students at Cornell who are interested in organizing a parachute club. Under the supervision of Mr. Goldberg, Cornell may soon have such a team. On November 30, a group of Cornellians went to New Jersey's Lakewood Sport Parachuting Center, where some made their first jump. Princeton is among the colleges that already have parachute teams, and is eager for competition in the Ivy League.

How do skydivers compete? Form and maneuvering in flight are judged, much like spring-board diving. Accuracy of landing near a target and baton passing in free fall are other events common in local and international competition. "The record book is being rewritten every day," says Stuart Goldberg, "and a world of imagination is open to the skydiver."
The College of Home Economics at Cornell has announced the appointment of Miss Catherine Porter Moore as assistant professor in the Cooperative Extension Service.

Miss Moore earned a B.S. degree from Ohio State University in 1958, and an M.S. degree from Women’s College, University of North Carolina, in 1963. Her graduate studies focused on home economics education, with emphasis on designs for programmed learning in home economics. She attended Hislop College, Nagpur, India, in 1956-57.

Robert L. Patton, Cornell University entomologist, has completed a book, Introductory Insect Physiology. This text is said to be the first new work in insect physiology to be published in the last twenty years. The book is designed as a guide to instructors, and as a text for inquiring entomology students.

Professor David Pimentel recently was appointed head of the department of entomology and limnology at Cornell. A 1948 graduate of the University of Massachusetts, Professor Pimentel received his Ph.D. from Cornell in 1951, and has taught insect pathology and general ecology since 1955.

Professor Pimentel’s current research is on relationships and interactions between insect and animal populations. Showing that a “genetic feed-back mechanism” controls natural population numbers will lead to more effective uses of insecticides and natural enemies as checks on insect numbers, he feels. The project is supported by a National Science Foundation grant for $90,800.

Four Peace Corps volunteers with overseas experience are currently enrolled at Cornell to get a better background for further service. Their studies are part of a program of Pennsylvania State University and is supported by a Ford Foundation grant.

The students, Parker Borg, Timothy Peterson, George Ridenour, and Robert Zimmerman, previously worked as teacher’s aides in the Philippines. Donald Ferguson, currently a lecturer and dairy manager at the School of Agriculture in Nigeria, and Robert Kourke, a drainage and irrigation engineer in Malaysia, will enroll at Cornell next semester as part of the same program.

Professor Raymond Sheldrake Jr., of the vegetable crops department in the College of Agriculture at Cornell, recently was elected president of the National Agricultural Plastics Conference at its annual meeting in New York City. Professor Sheldrake has done extensive research on the use of plastics for greenhouses and field crops.

The Robert N. Marshall Memorial Poultry Scholarship was recently established in the College of Agriculture at Cornell. The $200 award will be given to a deserving student interested in poultry. A 10-man committee from Ithaca and Cornell collected funds for the new annual scholarship, which was presented to the College of Agriculture by his widow, Mrs. Robert N. Marshall and his father, Fred Marshall.

Three freshmen in the College of Home Economics at Cornell were awarded $200 scholarships by the New York Dietetic Association this fall. Susan Crotty, Elizabeth Greenslade, and Janet Schwartz received the awards at the Cayuga Dietetic Association’s October meeting.

Charles A. Martinson has been appointed assistant professor in the College of Agriculture at Cornell. His area of research will be disease problems in roots of plants. He will investigate the interactions of plant roots, soil, and microorganisms.

Martinson received his B.S. and M.S. degrees at Colorado State University, and his Ph.D. degree this year at Oregon State University for work in plant pathology and soils.

Miss Alice M. Burgoin, professor of Institution Management, New York State College of Home Economics, Cornell University, assumed the chairmanship of the College Personnel Section of the American School Food Service Association when the organization’s 17th annual convention opened in Atlantic City, October 29. The ASFSA is a national, professional organization of 35,000 members who are engaged in all phases of school food service operations including education at the college level.
Having Problems

by Kenneth Goldstein '64

Am I smart enough for Cornell? What am I doing here? What will I do later? All students have asked these questions at some time. For some people, however, such questions present a major problem. Recognizing the importance of such problems during a student's stay at Cornell, the University has established the Educational-Vocational Guidance Office, located in Stone Hall.

The Educational-Vocational Guidance Office is concerned with the student's personality, aptitudes, and interests, how they relate to his stay at Cornell, and how they will affect his postgraduate plans. The services are available to anyone who needs them, but since facilities are limited, students must be recommended by members of the administration or faculty, or by another advisory agency.

Once recommended, the student has an interview with Howard G. Andrus, the director, to determine the extent of his problem and to program the battery of tests to be taken. Each student follows an individually-tailored testing program that provides essential information about his particular case.

Dr. Andrus finds that most students coming to his office fall into three broad, and sometimes overlapping categories. First, there is the student who has no idea of what he wants to do. Second, there is the disillusioned student who came to Cornell with specific vocational and educational goals, only to find that he made or thinks he made the wrong choice. Third, and sometimes the most serious, is the student with academic difficulties who may have to leave Cornell. The student who doesn't know where he is going will undergo a battery of tests to help define his goals. The battery includes vocational, emotional, and aptitude tests. Tests for the disillusioned student try to discover if he has the aptitude and interest for his intended vocation. The student in academic difficulty takes tests that are primarily diagnostic, since the main question is: does the student have the necessary abilities?

The tests provide background information and clues which may help solve the problem in the shortest possible time. However, Dr. Andrus emphasizes that the "real meat" of the program is the individual counseling and the analysis of the tests.

After testing (usually eight to ten hours) is completed at a time most convenient for the student, the student meets with Dr. Andrus for as many conferences as he needs. The average is three to five one-hour sessions.

During conferences, Dr. Andrus discusses the alternatives open to the student and tries to help him select the best one. "It is always my policy to be frank, fair, and honest with my advisees. The student should know where he stands," emphasizes Dr. Andrus. Both the student's strong and weak points are considered. Dr. Andrus works closely with students, but insists that final decisions be made by them. This counseling helps students define their problems, study alternatives, and finally choose the best course of action. As one student put it, "This was a wonderful experience in learning how to solve personal problems logically."

How effective is this service? During the fall semester '62, Dr. Andrus saw two-thirds more students than he saw in the academic year 1961-62. He attributes this growth to students spreading the word and even more significantly, to the faculty's growing awareness of the service's usefulness. All results are kept strictly confidential and cannot be released without the student's consent. If requested, Dr. Andrus will prepare a written report. As one student put it, "Not only did I learn a tremendous amount about myself, which enabled me to make what has proven to be a very satisfactory decision, but I found Dr. Andrus very much interested in my problem and extremely helpful."
ALUMNI

("Keeping the former students in touch with each
other and with the college" is as important to us as
it was to the Countryman’s first editors. Due to the
overwhelming response to our alumni questionnaires,
we were only able to sample a small portion in last
month’s issue. In this issue we complete our 60 year
coverage, including a special note about a member of
the Class of 1907. Hundreds of replies are still being
processed, and more news will appear in later issues.
—Ed.)

LYNN F. AYER ’07, Angola, N.Y., was on the
first Cornell Countryman staff. Upon graduation he
taught in Agricultural School, Hampton Institute, Va.,
for three years. Until 1937 he worked at various kinds
of farming. His son and daughter both graduated from
Cornell, the College of Agriculture and the College of
Home Economics respectively.

CHARLES MOSELEY, ’44, DeRuyter, N.Y., is
branch manager of the First Trust and Deposit Com-
pany of Syracuse, DeRuyter Office. He received an
M.S. degree in Agricultural Economics from Cornell
in 1957.

WALTER DURNIAK ’45, 1077 Waverly Place,
Schenectady County since 1950. He has been active
in the Cornell Alumni Association and served as the
president of the Junior Chamber of Commerce for
two years. In 1963 he received a 25 year certificate as
member of the Johnstown Grange. In 1958 he pur-
chased an old home and he is presently remodelling
it himself.

J. JOSEPH BROWN ’46, 822 West German
Street, Herkimer, N.Y., has been associated with the
Herkimer County Extension Service Association since
July 1, 1946. He has also served on various com-
mittees for the New York Association of Company
Agricultural Agents.

RALPH F. GEIGER ’47, 86 Sixth Ave., Oswego,
N.Y., is county agricultural agent of Oswego County.
He is a member of the Lambda Chanter of Epsilon
Phi and the Oswego County Holstein Club.

MYRON ELLWOOD IAEKNECKE ’48, 171
North Broad Street, Norwich, N.Y., attended the Lu-
theran Theological Seminary at Philadelphia after his
graduation from Cornell. He left the seminary in 1953
and became pastor of Christ Lutheran Church in Nor-
wich, N.Y. He also serves as an honorary member of
the Chenango Mental Health Committee.

WILLIAM C. PHELPS ’49, 20 Florence Rd.,
Easthampton, Mass., is credit manager of the Eastern
States Farmers Exchange, Inc. He has been with the
Cooperative Farm Credit Associations of both western
Massachusetts and Mohawk and Schoharie Counties.
He is president of the Cornell Club of western Massa-
chusetts.

WILLIAM H. CHENEY, ’50, is now State 4-H
leader in Alaska. He served as a 4-H agent in Oswego
County, N.Y., from 1951 to 1959. He is a member of
several outdoor groups in Alaska.

BRADLEY DONAHUE, ’51, 3335 Eastbrook
Drive, Fort Wayne, Ind., is presently employed in the
Market Development Division of United States Steel.

CAPT. LEWIS S. DAUGHERTY, ’52, 36 Mar-
kham Drive, Hampton, Va., has been in the U.S. Air
Force since graduation. He is an F-100 Weapon System
project officer in Headquarters Tactical Air Command
at Langley AFB, Texas. Previous assignments included
jet pilot instructor at Laredo AFB, Texas, and fighter
pilot at Wethersfield, England.

CORNELIUS C. JONES, ’53, is presently living
in Gauhati, Assam, India, as the Mission treasurer
of the American Baptist Foreign Mission Society. He
has occupied this position since 1958. Prior to this he
did graduate work at the Graduate School of Business
Administration of the University of California. He and
his family plan to return to the United States in 1964.

LEONARD J. SOLOMON ’54, 550 Illingsworth
Ave., Englewood, New York, spent six years as a real
estate salesman in New York City. He has received his
law degree, and is now a practicing attorney.

LOTHAR HERZ, ’55, 5 Stuyvesant Oval, New
York, N.Y., has been associated with the International
Ore and Fertilizer Corp. since 1958. From 1955 until
1956, he was a teacher of vocational agriculture in
Endicott, N.Y. In his present capacity he is involved
with buying and selling fertilizers to any free country
of the world. His work has taken him throughout Eu-
rope, South America, and the Middle East.

JOHN W. KIERNAN, ’56, Sherburn, N.Y., is
starting his fifth year as a vocational agricultural
teacher. Prior to this, he taught in DeRuyter, New
York. He is active in several teacher’s organizations
including the New York State Vocational Teachers
Association.

ERIC A. MULLER, ’56, 7 Duncan Drive, Tren-
ton, N.J., has been assistant sales manager of the Na-
tional Distillers and Chemical Corporation in Cran-
bury, New Jersey, for two years. Previously he worked
for five years for Swift and Company.

EVAN A. SYRIGOS, ’58, 8 Guilford St., Athens,
104, Greece, having returned to his native land upon
graduation, is manager of “Voktas” Inc., a poultry
raising enterprise. He is also a member of the Reserve
Officers Organization (USA).

JENNY E. TESAR, ’59, 342 North 16th Street,
Corvallis, Ore., was a teacher of general science in the
Oceanside, N.Y. School District upon graduation. In
1960 she became department chairman and a biology
teacher in a Junior High School in Monterey, Cali-
ifornia. This year she intends to work on her M.S. de-
gree at Oregon State University. She has received a
National Science Foundation Academic Year Institute
Grant.

GEORGE H. KILPATRICK, ’60, 208 Washing-
ton St., Ithaca, N.Y., is on a leave of absence from the
Campbell Soup Co. to study food distribution at the
College of Agriculture.

JOHN SHAFER, ’61, 3 Melvin Avenue, Cortland,
N.Y., is a chemistry teacher at Irontequet High
School, Rochester, N.Y. He is also working for his
M.A. degree at the University of Rochester.

MICHAEL D. DAHLBERG, ’62, New Orleans
18, La., is doing graduate work in zoology at Tulane
University. He has a teaching assistantship in biology
and is a dormitory advisor.
GLF Diesel Fuel pulls five 14" plows at one gear higher

Mr. William Coles, dairyman of Monroeville, N. J., says "GLF Diesel Fuel brought our tractors to life. It has allowed us to pull five 14" plows at one gear higher than previous fuels we've used. In fact, we could discover no difference in the performance of diesel fuels—until we tried GLF."

GLF Diesel Fuel additives increase power, engine efficiency

One of the additives in the new GLF Diesel Fuel is Amyl Nitrate, a chemical that causes the fuel to ignite at regular intervals, and at the right time.

Without this additive, diesel fuels tend to explode a little early and/or a little late, either when the piston is not yet up to the top of its stroke, or when the piston is past its peak, and on the way down. Thus, piston strokes are weak, the engine loses power, and burns excessive fuel.

Absolutely no injector trouble with GLF Diesel Fuel...

says George Ulrich, owner of the Malt Beverage Express at South Lima, N. Y. "We previously had considerable trouble with fuel injectors in our fleet of trucks. None since changing to GLF Diesel Fuel. Smoke has been reduced and we notice that our engines now develop full power."

The Injector Lubricant Additive in the new GLF Diesel Fuel keeps injectors free from deposits. These deposits build up fast when no Injector Lubricant is used. (An injector which is even partially clogged with deposits will "dribble" some of the fuel into the chamber, causing a smoky exhaust from incompletely burned fuel. This leads to higher fuel bills and loss of power.)

No starting problems

Mr. Ulrich says, "In the last 11 months we've used 60,000 gallons of GLF Diesel Fuel. During winter operations, we've experienced no starting problems. It's the best all round diesel fuel we've ever had."

New GLF Multi Service Greases

Two new automotive greases have been added to the GLF line. They are designed for specific and particular grease requirements.

GLF Multi Service Grease #1 has a body density that is right for year-round weather conditions, tight-fitted bearings. It is a high quality grease made with high grade oils, and has extremely good resistance to pounding.

GLF Multi Service Grease #2 is denser in body than #1, to be used in worn or loose-fitted bearings such as universal joints, water pumps and wheel bearings.

Ask your GLF Petroleum man to help you select the grease that will perform best for you.

Make sure your tractor runs right when you need it. Get all of your diesel supplies from GLF. GLF diesel fuels and oils are made to give your tractor more power, higher operating efficiency, and longer life. Cooperative GLF Exchange, Inc., Ithaca, N. Y.

PETROLEUM PRODUCTS & SERVICES
IN THIS ISSUE

Cornell Hockey: A New Coach—A New Season ........................................ 1
The Cornell Conservatory—"A Jungle in January" ..................................... 2
Who's Beat? ................................................................................................. 3
What Will They Think of Next—The Cornell Egg Roll .................................. 4
Ithaca Weather—Topic for Study and Complaints ......................................... 5
Silent Movies in Ithaca: Hollywood of the East ............................................ 6
Fragments from the Caves of Qumran ......................................................... 8
Sage Chapel—A Part of the Cornell Tradition ............................................. 9
The Evolution of a Mechanical Brain ........................................................... 10
Countryman Capsules .................................................................................. 11
General Stores—"Everything But Sea Water" ............................................. 12
Alumni .......................................................................................................... 13

Staff

Editor-in-chief ......................................................... Toni Gailey '65
Managing Editors .................. Jay Brodell '64, and Michael Whittier '65
Circulation Manager .................. Wade Nye '65
Librarian ............................................................... Peter Monnier '65

Freshmen: Marjorie Case, Donald G. Semmler, and Brenda Corlett.

Cover: North view from the College of Agriculture campus—Martha Van Rensselaer Hall, center of home economics education.
CORNELL HOCKEY:
A New Coach
A New Season
by Peter Monnier '65

"They're all good players," said Cornell's new hockey coach, Nevin (Ned) D. Harkness, describing the Big Red team of this season. "We don't have to depend on a handful of players to win a game. It's a team that works as a team."

The result of this teamwork was evident in Cornell's first two games this season when it defeated Waterloo 4-3 and crushed Pennsylvania 13-0.

Big Red hockey's front line is now made up of Jerry Kostandoff, Jim Stevens, and Murray Stephen, according to coach Harkness, with Steve Poole, Charlie Luther, and Pete Clark holding second line positions. Bill Oliver and George Walker are on first defense with Ed Sauer backing them up. At goalie is Errol McKibbon, replacing the injured regular, John Sharpe.

Kostandoff, Witherell, and Stevens at wing, captain Stephen Poole at center, and Walker and Oliver on defense, have all played for Cornell before this year. Six new members, all sophomores, have appeared: Stephen, center; Lampman, wing; Sauer, defense; McKibbon and Sharpe, goalies.

Coach Harkness also mentioned eight freshmen who would play winning games next year: Ross Mackesey, Bob Kinasewich, Wayne Currie, Murray Death, Bob Ferguson, Fred Allan, Harry Orr, Mike Doran, and Dave Quarrie.

Harkness has had more than thirteen years' experience in coaching hockey. Since 1950, he has pushed Rensselaer Polytechnic Institute to a top position among the eastern teams. When Paul Patten left Cornell's hockey team last year, Harkness was asked to replace him as coach, and accepted the position.

Under Harkness the team has already won several games for Cornell. If the team continues winning, and Harkness does as well at Cornell as he did at R.P.I., the Big Red may have its most exciting hockey season yet.

Cornell is closer than ever to the Ivy League title, although Harvard is favored for first place this season, with Brown a possible second choice. However, hockey at Cornell has improved so rapidly since its revival in 1957 that the Big Red could upset these predictions.

Cornell's toughest competitors this year will be Clarkson, St. Lawrence, R.P.I., and Harvard. R.P.I. has invited Cornell to its hockey tournament, Jan. 2-4, to battle with Yale, R.P.I., and Loyola of Montreal. The tournament may produce some of the best matches of the season.

Although there are no single outstanding players on the team, a sophomore, Murray Stephen, is leading the team with ten points. Two seniors, Jerry Kostandoff and George Walker, follow with nine points each. James Stevens, also a senior, ranks third with seven points.

Harkness hasn't said how far he thinks the team will go, but there is a good chance it will surpass last year's record of fourth in the Ivy League.
The Cornell Conservatory:

“A Jungle in January”

by Francine Grace ’65

Did you ever want to own your own chewing gum tree? How would you like to snap a banana off your own jungle plant? If you don’t happen to own such curious objects a trip to the Cornell Horticulture Conservatory will satisfy your curiosity.

The Conservatory has an environment which is unique on the Cornell campus. The atmosphere is moist and steamy. As you step in from the snow-covered wintery campus, you are overwhelmed by the prodigious growth of lush green leafy plants and brilliantly red and violet flowers. Within the glass walls of this greenhouse grow a large variety of rare and unusual plants which have been gathered from natural habitats all over the globe. The plants have been collected from Nicaragua to China. The specimens received at the conservatory are grown to maturity under very carefully controlled conditions. The objective here is to have the plants bear flowers and fruit. These structures are vital in classifying the specimens in the proper genus and species. Some of the plant types brought back from the wild have never been described in a scientific journal. The world never hears of their existence until Cornell issues the news of their discovery. New plant types are being created through hybridization by the professors supervising the studies in the Conservatory. Many of the results and discoveries which come out of current research here will be used to rewrite the horticultural dictionary known as Hortus. This dictionary is a reference list of all cultivated plants. It must be revised periodically to keep up with research on newly discovered species.

The species represented in the Conservatory create the vivid impression of a tropical jungle garden. Their leaves come in a wide variety of sizes and shapes and in every hue of green. The oldest member of the collection is a cycad known as Dion. This tree, which was brought to Cornell from Mexico, is closely related to the conifer or pine tree group. The tree has a single main trunk with a rough bark and lacks side branches. It has large fan-like leaves (about three feet long) growing from a single apex. There are two large oval structures attached at the top of the tree. These weigh about thirty pounds each. They are similar in function and structure to the cones on pine trees. They look like monstrous pine cones that just didn’t stop growing.

The popular favorites which are adored by children that visit the Conservatory are Sapodilla (“the chewing gum tree” which produces chicle) and the cacao tree which yields chocolate. The Conservatory has a banana tree which has yielded fruit annually until this year. Someone stripped some leaves off the plant which seems to inhibit fruit production. The Conservatory also has “swiss-cheese” plants. They are so called because of numerous holes in the mature leaves. Unlike the chocolate and chewing gum plant, they yield no commercial edibles.

One of the smaller and less spectacular plants, Dielisbachia, is poisonous for humans. The juices contained in the leaves and stem of the plant cause paralysis of the tongue and vocal chords. At one time it was used to punish Jamaican slaves. Dielisbachia looks like a harmless green and white speckled house plant.

Many of the plants growing in the Conservatory were cultivated from small cuttings. One specimen, Monstera, started as a small shoot, now reaches almost to the ceiling of the greenhouse and has leaves 30 inches long. The Conservatory flora rises to a height of about 18 feet. Many of the plants grow wrapped around some sort of mechanical support, like a tree. Their roots are exposed to the air and absorb moisture from the atmosphere. In some mature plants the portion of the stem which originally grew from the ground has shriveled and died. These plants are actually suspended in air. They are not parasites on the trees on which they climb.

The staff is constantly on guard against slugs, red spider mites, and mealy bugs. These tiny enemies attack and disfigure plant leaves and cause a number of problems. The Conservatory plants are on a highly irregular schedule. Just when one plant is beginning to flower, another is bearing fruit while yet another species is being invaded by a parasite. Concentrating on everything at once is necessary to keep the steamy jungle of weird and exotic plants flourishing in the wintry ice and slush of the Cornell campus.
Who's Beat?

by Judith Edelman '65

The Cornell Daily Sun recently reported that Cornell Day, a high school recruitment program, would not be held in the student union, which is the usual site of the annual event. The Sun suggested that the overpopulation of "beatniks" in Willard Straight Hall (called the "Straight" by Cornellians) was an explanation for the program's transfer to new headquarters.

The information had come from the Cornell Alumni News, a monthly magazine, which assured its readers that, although highly visible in the Straight, the beatniks, "and the sloppy clothes, bare feet and beards that accompany them" number only 100 at Cornell.

The estimate—100 beatniks out of about 12,000 students—would seem small if one considered the amount of publicity American campus liberals have been receiving recently by various news media. The term beatnik is casually applied to anyone who dresses in black, has a beard, renounces religion, or paints; in fact, anyone who in some way does not conform to what sociologists call "the group norm."

Youths, being more group-conscious than adults, are more apt to collectively designate each other as beatniks. Working young people apply the term to those who don't work. Young artists, musicians, writers, actors, dancers, and just-dabblers are placed in the beat stereotype by those in the conventional occupations. College students apply the term to a certain elite—an elite because they have risen above the mundane concerns of the average college student.

At Cornell, those labeled beatniks by their disapproving peers fall into three categories: architecture students, political liberals, especially those who dare claim membership in the Cornell Liberal Union, and finally, those who have been seen in the notorious Music Room.

Architects, as the architecture students are prematurely called, probably "hang around" more than any other group on the hill. When not in their painting studios, their sculpture building, or their occasional classes, they are playing touch football with graceful glee on the Arts Quadrangle or discussing art and life. One graduate student has been known to sit in Noyes Lodge at the "architects' table" for 12 hours a day, every day for two semesters. He held office hours there.

Noyes Lodge, one of the student cafeterias, is the fort of the architects. Certain groups of paint-gobbled, long-haired, blue-jeaned persons can be found standing guard here almost any time of day. Long hair is an important status symbol for both males and females in this habitat—in fact, it would take an alert and discerning individual to distinguish between the sexes.

While the architect expresses his discontent with society creatively and pensively, the Cornell liberal does so violently. A Cornell liberal is anyone who is a member of, has been a member of, befriends a member of, or sympathizes with the Cornell Liberal Union. Anyone labeled a liberal has been cursed by the anti-liberals, who are generally sympathizers of the fraternity-sorority system.

The curse on the liberals is evident at the Straight at three o'clock, where the Ivy Room and the Straight cafeteria can be readily compared. The cafeteria is a somber, medievally fashioned room with dark wood panelling and stucco walls. Looking around, one might see the occasional form of a Cornell liberal, consuming his daily diet of newspapers and magazines.

As is usually the case, a group of loudly shouting bearded fellows will be gathered around a table which is intended to seat less than their number, arguing over such political topics as the Danville Movement, general and complete disarmament, the McCarran Act, and whether or not landlords have the right to evict students for overnight mixed company.

Just through the archway, the anti-liberal sets up his headquarters. The Ivy Room is brightly painted. The walls are adorned with crests from each Ivy League school. A juke box blasts, resounding, over and over, a record which collegiate patrons have chosen as their hit of the semester. Participants in the social chatter sit at picnic tables arranged in rows across the room. Each table is represented by the delegates from the fraternity which has laid claim to that choice locality for girl-catching.

Finally, we have the Music Room set. The architects seek beauty, the liberals seek ideas, the Music Room set seeks solace. The serene people of the Music Room are known only within their own group, for they are rarely seen outside of their Bach-infested tomb off the south corridor of the Straight. In this room, with the ever-present sound of the classical symphony, they study and sleep, dissolving their troubles in their own drowsiness. It is a simple life they lead, and yet they too bear the curse of the anti-liberal.
What Will They Think of Next--

The Cornell Egg Roll

by Sue Isler '65

Did you know that the modern housewife has been having trouble peeling hard-boiled eggs? Restaurant owners have complained too. As a result, a new product has been developed by the College of Agriculture—Cayuga Brand Ready to Serve “Hard Cooked Eggs.” You may have seen the product in Ithaca stores. It’s as round as an egg, as long as a quarter pound of butter, and it’s sealed in a clear plastic wrapper.

“Hard Cooked Eggs,” called “egg roll” by those who developed and marketed the product, is just one of a series of new egg products that Cornell has introduced. The departments of poultry husbandry and agricultural economics are doing joint research to find new markets for poultry and egg products. The research series, for “new marketable poultry and egg products,” is being financed by both the federal and New York State governments. All the new products developed under this plan are marketed under the Cayuga brand, a research brand name. The new products are developed in the poultry department labs and are then marketed by the agricultural economics department as a marketing research study.

Impetus was given to the “egg roll” research by the many letters the College received from housewives, restaurant owners, and institutions. They all complained about sticking to the egg white of hard-boiled eggs. This particular problem has developed recently because eggs are now much fresher when they reach the customer than a few years ago, because of technological advancements in both the processing and marketing of eggs. Since the eggs are fresher, the membrane which attaches to the shell is much stronger and makes the eggs harder to peel when cooked. The “egg roll” idea was conceived as a convenience item to save time for the housewife and labor costs for restaurants and institutions. The “Hard Cooked Eggs” will keep for weeks in the refrigerator, are easy to use, and can be prepared exactly as any regular hard-boiled egg, without all the trouble.

Before this product could be marketed, several problems had to be solved. First and most important was the need for a plastic film that was impervious to air, was clear, and would withstand the heat of processing and not be brittle. The research was put in full swing about a year ago when polypropylene was developed, a plastic film with all the required characteristics. Other troubles developed when the yolks went off center and then broke before cooking. These particular problems have not been solved, although the product is now in stores in Ithaca and Syracuse. It is just a matter of extreme care in processing.

Each package of “Hard Cooked Eggs” contains four large eggs. The processing of the eggs is fairly simple. The raw eggs are funneled into a plastic film tube which is then sealed at both ends. The tubes are hung on racks and cooked at 200°F for 24 minutes. Once the product is cooled and labeled, it is ready for you, the consumer.

Among other products that have been developed under this joint research program are chicken hot dogs, chicken sticks, and an apple-egg nog drink. These projects, too, were handled the same way as the “egg roll.” The actual production is done by the poultry laboratory, the marketing by the department of agricultural economics. A full report is released by both departments including the formulas for the product, how it was processed, and how it was marketed. The College does not compete with other companies or processors once a product is developed. All reports of the research are published for the public, and any individual or company can use the findings.
One of many time-honored Cornell traditions is complaining loudly about the weather. "It's Ithacating again," people say bitterly or resignedly, when it rains or snows. The "monsoon" season, usually coinciding with freshman orientation week, has become legendary. Snow and ice bring grumbling about slippery paths and roads, as well as time to ski, skate, or tray-slide. When spring arrives, April showers bring a new crop of green rubber raincoats, as well as May flowers. These raincoats, known affectionately or otherwise as "beetles," are the only ones which are effective on those sodden, doggy days when it rains... and rains... and rains.

The weather is a standard topic of conversation everywhere, of course, but it seems to Cornellians that the Ithaca climate is of special interest. The concern caused by this fall's long drought, combined with the usual vocal complaints, has made this a particularly suitable time for publication of an area climate study. B. E. Dethier, climatologist of the New York State College of Agriculture, and A. Boyd Pack, state climatologist, of the United States Weather Bureau at Cornell, are the authors of such a study. The study is a bulletin, the first in a series of climatological summaries, which encapsulates area weather for the last twenty years. The authors plan to prepare similar summaries for about twenty other areas in the state. The bulletin includes a brief description of the region's terrain and general climate, as well as charts of means and extremes in temperature since 1933.

Although the job of climatologist does not include weather predicting, it does involve working with weather probabilities. This is one of the functions of Dr. Pack, who as a state climatologist, is employed by the United States Weather Bureau, which is a division of the United States Department of Commerce. He prepares summaries of monthly and annual precipitation. He also prepares climate summaries for the county soil survey reports which are issued by the Soil Conservation Service. Often, too, Dr. Pack and other climatologists are called upon to answer questions from the public, such as, "What is the average snowfall in a certain area? What was the total rainfall in a certain year at a certain place? How does the average January temperature at Anchorage compare with Ithaca?"

Dr. Pack points to one of several factors that influence the weather of the Ithaca area. With Lake Erie and Lake Ontario to the west and northwest of us, he says, "The air is heated as it passes over these large bodies of water. Then, as the air moves up slope, over the land, the water is released in the areas south and southeast of the lakes in the form of rain or snow showers. Ithaca lies on the edge of this area." This accounts for the area's showery type of precipitation.

People who expect weathermen to have special insight often ask Dr. Pack about the probability of snowfall by certain dates. He said that, although his bulletin gives a table of per cent probabilities of general precipitation, "Sufficient snowfall data have not been collected to determine accurate probabilities of weekly or monthly snowfall amounts." He did say, however, that "the annual snowfall in the Ithaca area has generally been heavier in the late 1950's and early 60's than in the 1940's. The bulletin states that the average annual snowfall is about 70 inches, and that very few winters have less than 45 inches.

Probably there will be no drastic change in the weather pattern in the next few years. That it will go on Ithacating is a fairly safe prediction. An even safer prediction is that Cornellians will continue to complain, commiserate, and wise-crack about it. But with almost all of us, the weather is just a topic of conversation, something we all have in common. And the accepted point of view—that the weather must just be stoically endured—is not to be taken very seriously. At least, it is discounted by those who love the clear, sharp fall afternoons of the best football games they can remember. Also silent in these discussions are the people who have paused, while walking on campus in the evening, and watched the snow falling softly, and the people who have studied in a favorite spot in one of Cornell's several gorges on a warm, sunny spring day. Probably, though, the next time someone complains to us about the weather we will agree—bitterly or resignedly, but also knowingly.
Silent Movies In Ithaca

by Wade Nye '65

One night in the fall of 1917, almost all of Ithaca gathered by the shores of Lake Cayuga to see a replica of the Phi Sigma Kappa house burn to the ground. They had come in response to an ad in the *Ithaca Journal* which had predicted the blaze, the place, and the exact time. The crowd cheered as a handsome young man braved the flames to rescue his coed sweet-heart trapped inside. Meanwhile, two movie cameras ground away furiously and captured the entire scene on film. This was an exciting era for Ithacans and Cornellians alike; the motion picture industry had come to town.

It all started in 1912 when Leopold Wharton, a movie producer, came to Ithaca to film the Cornell-Penn State football classic. He was immediately struck by the beauty of the natural scenery of the Finger Lakes region. The waterfalls, gorges, Lake Cayuga, and the campus far above its waters all contributed to Leo Wharton's decision; he would move his movie studio from New York City to Ithaca.

The move was called Wharton's Folly, but, undaunted, Leo and his brother Theodore began the task of turning this college town into a movie town as well. Where Stewart Park now is they built a studio; they imported such stars as Lionel and John Barrymore, Houdini, Francis X. Bushman, Beverly Bayne, Pearl White, and many more. The scenery and natural structures were ideal in producing the series *Perils of Pauline* and *Exploits of Elaine*, starring the lovely Miss Pearl White. She and her co-star, Creighton Hale braved drownings, gorges, waterfalls, and the old Lehigh Railroad, among other close calls, for 37 episodes. Movie goers all over the country jammed theaters to see the narrow escapes of the heroine and her hero, and, to the chagrin of the skeptics, Wharton Studios was launched into fame.

Mrs. "Mame" Hennessy, who lives on Court Street—just a stone's throw from campus, well remembers when she entertained many of the great film idols of the day in her home. A natural actress herself, Mame Hennessy played in dozens of films—portraying everything from a German spy in the prewar, flag-waving epic *Patricia*, to a white slave trader in *The Great White Trail*. Now 77, Mrs. Hennessy wistfully recalls those magic years. "No one will ever know the fun we had in those six years. They were such gay people—always laughing and joking."

Mame Hennessy's first encounter with the movie world came about in 1915 when her husband, a friend of the Whartons, took her to the set of a now forgotten picture. There he introduced her to the producers. She was offered a part as an extra in the scene, and on a lark she took it. After her performance she was handed an envelope containing ten dollars. From then on her interest in the movies increased sharply.

No one in Ithaca was immune to the movie bug: Indians from a nearby reservation, the judge, the police chief, and of course, Cornell students. One of them, Louis Walheim, became quite famous. A math student at Cornell for eight years, Walheim was one day introduced by Mame Hennessy's husband to Lionel Barrymore, who was also a mathematician. The two became fast friends. Barrymore introduced Walheim to acting in the movies, and soon the young student had forgotten all about mathematics. He quit school and had an illustrious career in the movies. The climax of his career came when he starred in the famous film *All Quiet on the Western Front*.

The movie industry had made a great impact on the Ithaca community, but not as much as the stars themselves. The Rock Hudson set of the day were not called bobby-soxers, but town girls and coeds alike went wild over matinee idols such as Francis X. Bushman and Creighton Hale. Pearl White set aflame many young hearts as she tore across the countryside in her low slung Stutz Bearcat—a canary yellow to match her hair. Scandals in Ithaca were as typical then as they are now in movieland around the world. The whole nation was shocked when Francis X. Bushman left his wife and three children to set up housekeeping with his co-star Beverly Bayne. The move entailed going across the street to where the Kappa Kappa Gamma sorority now stands.

All in all it had been a breathtaking seven years, but as quickly as the stars had come, they were gone. Mame was invited to go to sunny California with the rest of them, but Ithaca won out. But once in awhile, on the late show, Mame Hennessy spots an old friend, and she remembers those fabulous days when Ithaca was a center of the film industry.
Hollywood of the East

by Margaret Jensen ’66

Anyone who has ever spent a summer in Ithaca knows that it is quiet, and entertainment is sometimes hard to find. But for the last three summers a local group has tried to fill this gap with a program called “Summer Ithaca.” Last summer the program included a revival of Ithaca’s movie memories.

In 1912, the Wharton brothers came to Ithaca to film an athletic event at Cornell. From then on, the “wilds of Ithaca” were called “Wharton’s madness” by the New York City critics.

In 1915, F. C. Cunning, under the name of “Wid” in a column “Film and Film Folk,” a regular feature of the New York Evening Mail, wrote that he had made a trip to the “wilds of Ithaca to see what those mad Wharton brothers, Theodore and Leopold, better known as Theo and Leo, were up to.”

Everyone in New York had been skeptical about the choice of Ithaca and to quote Wid’s column, “Well, for many years Ithaca has been known, where it was known, as the town Cornell University claimed home. From the indications about the city these days, I’m willing to bet a red apple that in the future Ithaca is goin’ to be known to more folks as the place where they make those Wharton films than as any university location. Those ‘picture people’ just simply ‘own the town.’”

Wid, too, had thought that the Whartons were foolish to settle in Ithaca, but instead he found that “it has one of the greatest varieties of location within a few miles of the studio (now Stewart Park) of any spot ever visited. Surely the greatest in the East.” Wid then went on to describe Ithaca’s beauty. “On either side (of the lake) tower great hills and on one of these hills is Cornell, with gorges galore cutting their picturesque way down to the valley. There are enough locations at one of these gorges, which is 100 yards from the Campus and extends directly down into Wharton’s ‘backyard’, to take beautiful scenes for ten years . . . but this isn’t all; there are at least twenty such gorges cutting through the hills within the ten miles we traveled up the side of the lake.” In addition to all this beautiful and “useful” scenery for location, Wid mentions the “quaint little shacks, mining camps, mining shafts, and salt mines 100 yards from the studio, and at Cornell you can find every kind of architecture that anyone ever dreamed of.”

In contrast to Wid’s predictions, the last movie was made in Ithaca in 1920 when Harry Grossman of Grossman Pictures of New York went “on the rocks” financially filming “The Million Dollar Reward.”

The Whartons had filmed several series: The Get Rich Quick Wallacefords, The Mysteries of Myra, with Houdini, the magician, acting as technical advisor, and the Patria series, patriotic films about German activities in America during the war. They also filmed The Red Peril, which disclosed the underhanded plans of the Communists and the Industrial Workers of the World, a story given to the Whartons by the FBI. The Eagle’s Eye, filmed in 1918, was based on information supplied by the U.S. Secret Service concerning the Imperial German government’s intrigue in America. This was the Whartons’ last film.

The Whartons moved west and subleased their studio to International Films to make The Beatrix Fairfax series with Olive Thomas, Grace Darling, Warner Oland, and Harry Fox. The studio was then subleased to Metro Film Corporation and Norma Talmadge Corporation, jointly. Metro produced Adopted Son, a real “tear jerker,” starring Francis X. Bushman and Beverly Bayne. The Talmadge Corporation filmed a sequel to Tess of the Storm Country a story of life around Cayuga Lake by Grace Miller White, a famous local author, and starring Norma Talmadge who later became famous in Hollywood. With the failure of The Million Dollar Reward series, Ithaca’s reputation as the movie capital of the East ended.

Wid’s prediction that the movie industry would live to outshine the educational advantages already entrenched here did not come true. For one thing, no one could foresee that the weather would not cooperate. Even during the short summer season it was not possible to film on schedule. Many times there were thunderstorms, rain, and even fog, and the weather would remain unseasonably cold. Also, Professor Shadwick of Cornell stated in an article in the Cornell Sun, April 20, 1938, that when the Wharton brothers got into financial difficulty, “the local people seemed to entirely disregard the economic possibilities the industry offered to Ithaca.” Thus, the movie industry moved on to Hollywood with its California sunshine where there was more possibility for financial success, and left the “wilds of Ithaca” after only six years.
Fragments From The Caves of Qumran

by Isaac Rabinowitz
as told to Ken Balmas '65

Professor Isaac Rabinowitz, Hebrew and Biblical scholar attached to the classics department of Cornell University states that no responsible scholar today doubts the authenticity of the Dead Sea Scrolls. The suspicion of forgery voiced in some quarters soon after the announcement of their discovery in 1947 was rendered baseless by the intensive study to which the texts have since been subjected. The Scrolls were recovered from the caves near Kirbet Qumran. The ruins of the Qumran are located at the northwest corner of the Dead Sea in Jordan, about eighteen miles east of Jerusalem.

The settlement at Qumran was built on the site of an older Iron Age settlement in the second century B. C. Many scholars believe that the builders were a group of Jews who later developed into the Essene sect. The site was occupied until about 30 B. C., when an earthquake caused its abandonment. It remained uninhabited until about 1 A. D., when it was reoccupied by Jews of the same persuasion as the previous inhabitants. They remained until Qumran was destroyed by the Romans during the First Jewish War of 66-70 A. D. After its destruction by the Romans, the site has lain virtually abandoned except for brief occupation by a Roman legion and by refugees during the Second Jewish War of 132-35 A. D.

Only the contents of Caves 1-3 and 5-10, except a few of comparatively minor importance in Cave 1, have been published in full. Also published are a few texts from Caves 4 and 11. Cave 4 is probably the most important. It contained fragments of over four hundred manuscripts, which will fill several volumes when printed. All but one scholar agree that these texts are either pre-Christian or from the first Christian century. Several of those from Cave 1 reflect a period of eschatological excitement. Eschatology refers to the belief that the ushering in of the prophetically promised Kingdom of God is imminent. Other texts contain regulations and directives for the conduct of the pious during the “End of Days.” These are derived from Scripture through midrash—the searching of the text for religious norms and ideas.

The American Schools of Oriental Research have played an important role in supplying the funds and personnel needed for Dead Sea Scroll research. Cornell has been a charter member since the Schools’ formation in 1900. A. Henry Detweiler, associate dean of Cornell University’s College of Architecture, is now president of this organization.

The Dead Sea Scrolls first came to the attention of the world in 1947. They were discovered by a fifteen-year-old Bedouin shepherd. Just how the event occurred, however, is in doubt because the boy has changed his story since he first told it. According to the earlier version, he and a companion were seeking a sheep or goat which had strayed from their mixed flock, when he happened to throw a stone into an opening in the face of a cliff. From within came a sound of breakage. Frightened at first, the lads ran off. Later, however, they returned, entered the cave, and found the documents.

Some time later, the Scrolls were brought to Bethlehem where they came into the hands of antiquities dealers. Thence, with Khalil Iskander—a Syrian cobbler—as intermediary, one lot was acquired by the Syrian Orthodox Metropolitan of Jerusalem; another lot was bought by the late Dr. E. L. Sukenik for the Hebrew University in Jerusalem. Much later the Metropolitan’s manuscripts were also purchased by persons acting for the Hebrew University. Today, all the major Scrolls from the first Qumran Cave are reunited in the Hebrew University’s Museum of Antiquities.

Since 1948, through the zealous searching of the Qumran area by Bedouins and archaeologists, ten additional manuscript-bearing caves were located.

The main concern of Professor Rabinowitz is with the interpretation of hitherto unknown texts among the scrolls. This requires closer examination of the internal data. An understanding of the Hebrew Bible and of the chief ancient versions is indispensable to accurate interpretation of the Qumran texts. A knowledge of the history and thought of the period of Jewish history in which they were composed is also vital. Scientific studies of the Scrolls is still in its early beginnings, according to Dr. Rabinowitz, and many current hypotheses are certain to be revised as such study is carried forward.
Sage Chapel: A Part of the Cornell Tradition

by Wayne Warriner '67

Sage Chapel and the idea of non-sectarian worship were born amid the furor that surrounded Cornell in the 1870's. Henry Williams Sage, second chairman of the board of trustees, donated the chapel to dispel the charges that Cornell was an atheistic institution.

Sage's son, Dean, endowed the visiting preachership subject to President White's condition "that the chapel would never be delivered over to any one sect." Today the chapel is supported by the income from the initial gift of Dean Sage and part of the funds endowed by Charles Monroe Thorpe and Jessie Moulton Thorpe to Sage Chapel and Cornell United Religious Work.

The original chapel, built in 1873-74, was considerably different than the structure we are familiar with now. The Reverend Charles Babcock, head of the architecture department, designed the red brick, Gothic structure. It consisted of an east-west nave and a side chapel located in the southeast corner with a small tower constructed in the angle between the two wings.

The seating capacity of this first version of Sage Chapel totaled five hundred, so as the University grew it had to be enlarged. Evolution into the present form has taken a series of changes spanning the turn of the century.

First all but the west end of the building was torn down. It was reconstructed in the form of a double cross with two transepts intersecting with the central nave. The northern end of the east transept was later extended. Most recently, the main hall was lengthened westward so that a maximum of 1400 persons can now be seated.

Many memorials are included in the structure. Among these are the pulpit, in honor of Dean Sage, and the chancel which dominates the front of the church. The chancel or apse was erected by the University in recognition of its "second founder" Henry Williams Sage. He and his wife are interred beneath the floor of the apse.

The ante-chapel on the north side was dedicated on Commencement Day in 1883. It is a mausoleum for prominent figures in Cornell history. Among those buried there are Jennie McGraw Fiske, John McGraw, Ezra Cornell, President White, and Edmund Ezra Day.

Notable of the monuments is the Forestry Window, in memory of Dr. and Mrs. Fernow. It was made and given by Jessie Van Brunt, a student and close friend of the Fernows'. The theme of woods and stream expressed in stained glass symbolizes Professor Fernow's work in forestry.

The ornate chapel houses a weekly service of simple format. The order of worship is the same as in most Protestant churches except that no offerings are taken.

Students take an active part in the program. Members of the Quill and Dagger Society, senior men's honorary, act as ushers. Occasionally students may give the scripture reading, and many are regular choir members.

As mentioned previously, the service features a different minister each Sunday. Cornell United Religious Work is responsible for scheduling the speakers. CURW Director L. Paul Jaquith works out a tentative list of qualified and available preachers. This is submitted to President Perkins who writes letters of invitation. Final arrangements are carried out through the CURW office.

No concerted attempt is made to obtain a preacher from each sect. A more important criterion is what message the man has to bring to Cornellians.

On the completed schedule, Reverend Jaquith conducts the first service of the year and fills in when unavoidable absences occur. A train of excellent speakers follow him in the pulpit during the regular school year and summer session.

The clergymen are free to choose the topic for their sermon. The only instruction they receive is orientation to the standard worship procedure. Many views are presented, sometimes quite divergent and always thought-provoking.

The thread of unity stemming from basic belief in God lowers the barriers between denominations, and disqualifies the theory of the 1870's that each sermon would cancel the preceding one and "the ranks of agnosticism and atheism would be swelled to a vast army."
The Evolution of A Mechanical Brain

by Peter Heilemann '66

Can man ever know the limitations and mechanics of his own mind? Prof. Frank Rosenblatt, director of the Cognitive Systems Research Program at Cornell, is trying to answer this and other questions by attacking one of the mind's most basic factors—memory. His number one objective is “to investigate the mechanisms of memory and find out how it works.”

Professor Rosenblatt's investigations began seven years ago when he formulated his own theory of memory; briefly, that memory is fixed and stored by chemicals at the synapses, which are contact points between brain nerve cells. This became the starting point for a project that was to cost more than $1 million and to require more than seven years of research.

Presently, the program receives $100,000 per year from the National Science Foundation.

Before Professor Rosenblatt received any of these grants he began translating his theory into a mathematical system. Once he completed the system he started to build his first brain model in the Cornell Aeronautical Laboratory at Buffalo. Essentially, this model was a series of 500 motor-driven potentiometers (variable resistors) that could be interconnected at random. These were then joined to a retina of 400 photoelectric cells, where visual stimuli were fed into the machine. This first hardware model, the Mark I, is “used primarily for visual discrimination.” The potentiometers, each one representing a brain synapse, do the “remembering.”

The early digital research was practically done under the Aeronautical Lab's Research program. To finish this work and start building the Mark I Prof. Rosenblatt sought support from various government offices until coming to the Office of Naval Research, which has supported him since. In 1969 his work was moved to Cornell, where it became officially established as the Cognitive Systems Research Program.

The research is done in four stages. The first, pure math work, is concerned with forming equations representative of neuron systems. For example, Professor Rosenblatt calculates that 10 per cent (1 billion) of the brain's neurons may recall 100 years of experience. Abstract proof of such facts does not mean they are physically demonstrable so the theory is put into physical terms through the hardware models.

In the second stage, math work is translated into a numerical system imitating the arrangements of a brain model. Added to this are numerical representations of the brain's environment, such as a set of visual patterns on the retina. The system and environment are then tried out on the Atomic Energy Commission's computers at New York University, simulating what would occur in a brain model.

If the system is successful with the computers, a new hardware model may be constructed. Usually, though, many systems must be tried. This is the third stage. It and the first phase are carried out in Hollister Hall, where the Mark I is located. This model is the size of a closet locker about 10 feet long. Attached to it is a camera with a bank of photo cells registering stimuli, letters, and geometric shapes.

The fourth stage of the program, begun 18 months ago and located in Stocking Hall, is focused on neurochemistry and electrophysiology. There are two subprograms, one involving the chemicals that transmit messages from one neuron to the next, and the other concerned with the hippocampus, a region of the brain beneath the cerebral cortex, and the part it plays in memory. The second of these is done with rats in a maze. After their hippocampal regions are removed the rats are tested on how quickly they remember the maze. This experimentation is related to work done at McGill University with Wilder G. Penfield. The hippocampus was removed from two epileptic patients of necessity. Both patients lost the ability to retain new memories, even though they recall all events before their operations. Similar results, which may eventually prove that the hippocampus produces substances that fix memories, are hoped for in Stocking Hall.

In the making is the largest model yet built by Professor Rosenblatt, the Tobermory. It will have 24 times the memory capacity of the Mark I contained in its 12,000 magnetic cores. After being fed the necessary information, Tobermory will have a vocabulary of a few dozen to over 100 words,” be able to distinguish sounds, and in a later modified version, may be able to speak. Still later, it will be used for visual discrimination.

Professor Rosenblatt's project has often been misinterpreted and he asserts that “this is first and foremost a program of theoretical biology,” not technology. There are many theories of memory besides the one advocated by Professor Rosenblatt, but nothing has been discovered to prove any of them. Within the field, “literally nothing is definitely known about brain mechanisms responsible for memory, apart from theory.”
Poultry, cattle, and other farm animals may benefit from the experimenting of Prof. Norman R. Scott, agricultural engineer at Cornell. Hopefully, soil will be put to use in raising and lowering temperatures in poultry houses and cattle barns. Prof. Scott has buried 400 feet of steel pipe eight feet below the ground on the poultry experiment farm to test the removal and return of heat to and from the soil. This would be a fan-operated air-conditioning system in which the air in the pipe is warmed in winter and cooled in summer. As a result, dairy cattle and poultry might not show those reductions in production caused by high summer temperatures. Lower operating costs would give this system the advantage over standard heat-pump air-conditioning.

Professor Roger A. Morse, apiculturist at Cornell, and Professor Keith H. Steinraus, bacteriologist at the Geneva Experiment Station, have developed a commercial process for producing honey wine, or mead, the age old beverage of the Norsemen. This wine is being reintroduced as a result of more than ten years of research in perfecting fermentation and uniform quality. Profs. Morse and Steinraus have produced a still wine, a sparkling wine, and now are on the verge of creating a sherry made from honey. The work is being inspected by the Internal Revenue Service and is presently licensed as an experimental wine only.

The price should be favorable upon commercial distribution, as production costs compare favorably with those of other wines.

The Office of State Climatologist at Cornell is the new center for the U.S. Weather Bureau's New York climatological services. Previously, all state weather records were kept in Albany.

The office of A. Boyd Pack, Weather Bureau state climatologist, is located in the Plant Science build-

ing of the College of Agriculture. It now compiles reports of all weather events in the Empire State. Although Dr. Pack's office does not issue local forecasts, it does prepare the weather portion of the weekly weather and crop bulletin issued jointly by the State Crop Reporting Service and the Weather Bureau.

Prof. A. A. Johnson, director of Extension Service, recently announced the appointment of Prof. John C. Swan as state leader of county agricultural agents.

Prof. Swan came to Cornell in 1953 after work in Niagara and Renssealer Counties. Six years of extension work at Cornell as assistant state leader was followed by the associate leadership position he has held since 1961. He has served on inter-departmental college committees and contributed to the program development of the state's fields of floriculture and ornamental horticulture.

Two Cornell scientists were recently honored by election as Fellows in the American Society of Agronomy. Profs. Robert B. Musgrave and Edgar R. Lemon, both of the department of agronomy, received their citations at the 55th annual meeting of the Society.

Dr. Musgrave, who received his undergraduate and graduate training at the University of Illinois, was lauded for his research on the lime and fertilizers used in New York State. His concern with the storage and production of hay, corn, and small grains and, more recently, with the limitations of crop production, have earned further recognition for him.

Dr. Lemon, interested primarily in soil physics and physical chemistry, received B.S. and M.S. degrees from Cornell and a Ph.D. from Michigan State College. He was commended for his work with the "physics of gas exchange between plant roots and porous media and the participation of solar energy at vegetated land surfaces." At present, Dr. Lemon is concentrating on the "transfer processes between plant communities and the atmosphere that govern the exchange of water vapor, carbon dioxide, and heat."

The government of Jamaica is benefiting from the services of Prof. Robert D. Sweet of the vegetable crops department. Prof. Sweet left Ithaca December 2 to begin a three month period as a consultant in the establishment of a vegetable industry on the island. This will be a follow-up on his work there last fall when discussions were made on organizing a Jamaican group trained in vegetable crops. Such a group will plan and carry out a program for increased production and marketing of locally grown products.

On December 3, 1963, Dr. Nyle C. Brady was named Director of Science and Education in the Office of the Secretary of Agriculture. Reporting to Secretary of Agriculture Orville Freeman through Dr. Brady are the Federal Extension Service, Agricultural Research Service, and Cooperative State Research Service. Succeeding Dr. Brady as head of the agronomy department at Cornell is Prof. Marlin Cline, who will hold the position until November 30, 1964.

Prof. N. C. Brady

Dr. Brady has been at Cornell since 1947 and was the recipient of the Professor of Merit Award given in 1952. He has also served as professor of soils at the University of the Philippines, helping to train agricultural leaders. Recent interests in forage crops coincide with his personal field of study, soil-plant relationships.
General Stores

"Everything But Sea Water"

by Albert Beilby '63

In the Joe Friday tradition: It was Thursday, a sultry August afternoon in 1961. The time 2 p.m. The phone rang. A hand reached out and lifted it from the receiver. The voice at the other end sounded menacing as it issued the orders.

"... and we need five thousand by Monday."

"But ... but I don't know if we can handle an order like that on such short notice."

"Look, you're getting paid to do this job, and you'd better come across with the goods. If you don't, someone we both know is going to be in trouble, and I mean big trouble." There was a sudden click, and then an ominous silence.

An unsteady hand replaced the phone. Then swift orders were given as Cornell's General Stores rose to meet the challenge. The following Monday, five thousand fluorescent light bulbs were ready for Mann Library.

The preceding account, admittedly facetious, does illustrate three points. For one thing, there is an enterprise at Cornell which was established to supply the various departments with the items necessary for their work. This does not include special items, such as sea water for the zoology department, but rather those items that are commonly used by all departments in general. Another is that, due to the logistics involved in stocking the various items, there are some tense moments when it appears that demand for an article will exceed the supply. Finally, some orders reach very sizable proportions.

General Stores should not be confused with Scientific Stores, or with the Typewriter and Instrument Repair Division. All three departments are found within a stone's throw of each other near the heating plant on Dryden Road.

General Stores, once called College Stores, was established for two reasons. One reason is that they can buy at lower prices by ordering bulk quantities, and the other is that the supplies are available as they are needed. The necessity of having these supplies ready when needed calls for some ticklish calculating by the General Stores' manager, Mr. Ralph King, and the purchasing department. All ordering is based on past records, and this is not made easier by the fact that the University is expanding more and more rapidly. All of the records are kept on tape in Day Hall, and all orders are initiated with IBM cards. This naturally makes the task much easier, but does not eliminate a certain amount of guesswork. General Stores is understandably proud of the fact that while there have been many close calls, they have nearly always "come across with the goods."

The markup is also based on previous experience. The stock is sold at cost plus whatever markup is necessary to meet anticipated operating expenses, as based on the preceding year. Currently, all items are sold at 12 per cent above the purchase price. Should the stores make a noticeable profit or loss this year, the price will be adjusted accordingly next year.

Mr. King happened to be checking over a six months' summary when interviewed and he willingly offered some figures that serve to illustrate the prodigious quantities of materials involved. The Store received orders for 12,602 fluorescent lights during the six months from July 1, to December 31, 1962. These were the same type as those used in the Mann Library incident. Also sold were 35,189 ream boxes of mimeo paper, 62,000 student exam books, 258 desks, and 45,500 thumbtacks.

Taken separately, each item can show what is happening, or what has happened, in almost any place of campus activity. For example, of the 258 desks received, none went into new buildings as original equipment, and none replaced any older furniture. All went into existing buildings as departments increased their number of secretaries and assistants. This attests to the fact that our facilities are not as spacious as they once were.

General Stores makes its deliveries with three trucks; a small "econo-van," a one and a half ton panel truck, and a two and a half ton stake body truck. These are kept busy most of the time. The stores also own a small high-lift cart which easily handles the heavier stock. At one time the men unloaded bagged cement, that is used for repairs, on hand carts. One day, two men were injured, though not seriously, when a cart got out of control. It was because of this that the highlift was purchased, and it has added immeasurably to the men's morale.

Outside the departments on campus, the stores also serve the Agricultural Experiment Station at Geneva, and those people who perform some sort of extension work around the state. General Stores sells many things that students could use, for example: pens, pencils, ink, note books, paper, folders, and erasers. However, General Stores' first rule explicitly states: "Sales for personal use are not permitted."
(The Cornell Countryman is once again offering its alumni readers an opportunity to get re-acquainted with each other. The staff is still processing the many returned questionnaires, and will forward information as time and space permit.—Ed.)

KENNETH C. LIVERMORE '09, 4389 Clover St., Honeoye Falls, N.Y., owner of the Quaker Hill Farm since 1920, says he has experienced about all the physical and economic changes in state farming since the horse and buggy days. He specializes in seeds and farm chemicals. A member of Alpha Zeta fraternity, he was professor of farm management at Cornell from 1909 to 1920.

JAMES D. BREW '12, Westminster Manor, 81 South St., Auburn, N.Y., was a professor of bacteriology at the University of Tennessee from 1938 to 1949, and at Cornell from 1919 to 1930. He served as mayor of Holley, N.Y., from 1952 to 1963.

NORMAN D. STEVE '13, 538 West Lake Rd., Hammondsport, N.Y., retired in 1959 to a life of fishing, boating, and sailing on Keuka Lake. From 1926 to 1959 he owned and operated a retail coal and oil business. Before that he was assistant of rural engineering in the College of Agriculture at Cornell.

SHERMAN R. LEWIS '14, Old Homestead Farm, Washingtonville, N.Y., retired from active farming in 1951. The old farm house was converted to 21 apartments. Recently, he developed a 50-space trailer park. Mr. Lewis has been a member of the Farm Bureau for 49 years, and is a director of the Orange County YMCA.

FLOYD W. DEGOLYER '15, Gloversville, N.Y., retired from his sawmill and building supply business in 1963. He was a member of the Board of Education of Mayfield Central School for more than 20 years, and is a member of the State Forest Practice Board.

LOUIS J. CAMUTI '16, Box 146, Fleetwood Sta., Mount Vernon, N.Y., has been in small animal veterinary practice since graduation. In 1962 he wrote Park Avenue Vet, published by Holt, Rinehart, and Winston.

LAURENCE H. MacDANIELS '17, 422 Chestnut St., Ithaca, N.Y., retired in 1956 as chairman of the department of floriculture and ornamental horticulture of the College of Agriculture at Cornell. He has spent two years with the Cornell contract in the Philippines. He has also served on two assignments for the AID Technical Assistance Program in Yugoslavia, and with a Montana State College project in Mexico.

HOLLIS V. WARNER '18, Box 373, Riverhead, Long Island, N.Y., is now retired after having raised Long Island ducklings for more than 40 years.

ARTHUR J. MASTERMAN '19, 124 Judd Falls Rd., Ithaca, N.Y., was with the GLF Coop Ex-change prior to his retirement in 1958. He spent six years with the Standard Oil Company of New York in foreign service in India, beginning in 1920. He is a member of Alpha Zeta fraternity. In addition to other local activities, he operates a tree farm.

DUDLEY R. MERRILL '20, 105 Hewlett Ave., East Patchogue, N.Y., retired in 1961 as director of public relations and operations manager of National Propane Corporation. In 1921 he became a teacher and later worked as truck and farm implement dealer before going into the bottled gas business.

JAMES A. McCONNELL '21, Jamac Farm, Mansfield, Pa., former professor in the School of Business and Public Administration at Cornell, served 18 years as general manager and executive vice president of GLF. He also spent about two years with the U.S. Department of Agriculture and formerly held executive positions in the CCC.

CLIFFORD M. BUCK '22, Salt Point, N.Y., is with the Farmers and Traders Life Insurance Co. He is a trustee of the Pleasant Valley Free Library, and is active in several other local organizations. As a student, he was circulation manager of the Cornell Countryman.

WILLIAM J. WIGSTEN '23, 1005 So. Main St., Horseheads, N.Y., is a farmer. He was with the Farm Credit Administration from 1932 to 1944. He is active in many local farm organizations, and is mayor of the village of Horseheads. His wife, two daughters, a son-in-law, two brothers, and a sister were graduated from Cornell.

ALFRED J. LEWIS Jr. '24, 110 Lewis Rd., Walworth, N.Y., is owner of a farm that has been in his family for 70 years. He plans to move to Newark, N.Y., in the near future, to be near other members of his family.

D. HARVEY KROUSE, '25, 1426 Ellis Hollow Rd., Ithaca, N.Y., is associate director of admissions relations at Cornell. He is a member of several local organizations, and the Botanical Society of Western Pennsylvania. At present Mr. Krouse is pursuing informal graduate work in taxonomic botany in the College of Agriculture.

ARTHUR J. PRATT, '26, Maple Grove Pl., Ithaca, N.Y., began specializing in the breeding and growing of potatoes in 1962. From 1932-1962 he was on the staff of the vegetable crops department at Cornell. Mr. Pratt expects to spend January, 1964, in Tasmania and the remainder of the year in Liberia.

WENDELL E. FIELD, '27, 15 Bradford Dr., Syracuse 24, N.Y., is manager of the Central New York Regional Market Authority since 1955. He is a director of the New York State County Agents Association and the National Association of Produce Market Managers and a member of Epsilon Sigma Phi extension fraternity.

HENRY L. PAGE, '28, Voorheesville, N.Y., currently director of the Division of Plant Industry for the New York State Department of Agriculture and Markets, began his career in the Department of Agriculture as Oswego County Agricultural Agent upon graduation from Cornell. He was in private industry until 1959. He married Miss Ruth Munro, Mt. Holyoke '33, in August.
$ Over 700 dollars saved in one year

The Kirby Brothers, crop growers and dairymen of Albion, N.Y. keep a tight rein on the cost of production. One of their most successful cost-cuts has been in fertilizer. Last year they saved over $700 in fertilizer cost alone, by making use of GLF’s Complete Crop Service.

First, they took most of their fertilizer in December and January, thus getting the benefit of GLF’s Early Order Discounts.

Second, they paid cash — another big saving.

Third, they trucked their own from the GLF Fertilizer Plant at Batavia, N.Y.

They are now working on a fourth way to cut the bill — BULK. This would increase their savings even more.

$ More savings with GLF Ferti-Flow

The Kirbys found out quite a few years ago about the savings in GLF high analysis fertilizers. They use the Ferti-Flow grades, which save them up to $14 per ton on a plant food basis. (You can do this too. For example: use one ton of Ferti-Flow 10-20-20 instead of 2 tons of 5-10-10.)

Averaging over 24 tons of corn silage to the acre

The GLF 100-20 Corn Club is composed of a group of farmers who agreed to follow specific recommended corn growing practices. These practices are designed so corn yields can reach or exceed 100 bushels of grain or 20 tons of silage per acre. In the two years prior to last season (1963 results are not yet compiled), enrollees have averaged over 24 tons of corn silage; and over 10,500 lbs. of TDN to the acre.

These records have indicated that the following three practices have given greatest results [always assuring that lime level is adequate]:

1. Adequate weed control is an absolute essential.

Where broadleaf weeds are the only weed problem, GLF Weed Killer “66” improved, returns up to an extra 10 tons of corn silage per acre for every 50 cents spent. Where annual grass is the problem, Atrazine returns up to an extra 10 tons of corn silage per acre for every seven dollars spent.

2. Plant population rate should be as high as soil conditions permit.

Increasing population from 15,000 to 20,000 plants per acre can increase corn silage yields by as much as 3 tons of silage per acre, all other factors being equal. These three tons can produce up to 3,600 lbs. more milk, worth $144. Extra seed cost is approximately 50 cents.

3. Many 100-20 Corn Club growers selected Ferti-Flow 16-8-8.

This is a good choice for men with 10 acres or less because it supplies, in one application, a balance of plant foods ideal for corn production.

Growers of large acreages were able to save about $2 per acre by using GLF 5-20-20 Ferti-Flow Fertilizer at planting, plus liquid nitrogen or GLF Ammonium Nitrate later in the season.

Growers with the split boot planter prefer the second method because there’s less chance of fertilizer burn.

See your GLF man today. Find out how much you can save by ordering your fertilizer now. Remember, the earlier your order and take, the more you save. Ask too about all the other assistance that goes along with GLF’s Complete Crop Service.

Cooperative GLF Exchange, Inc., Ithaca, N.Y.

COMPLETE CROP SERVICES for greater net returns
IN THIS ISSUE

Biology Change Pending .................................................. 1
Men With an Ivy Beat ..................................................... 2
Cornell Aero Lab: Space-Age Research .............................. 3
International Interviews on the Upper Campus .................. 4
CA Storage: Apples and Astronauts .................................... 6
Bird Tracking Simplified By Transmitters ........................... 7
Dutch Elm Disease—A Threat to Campus Beauty .................. 8
Cornell's Military Tradition ........................................... 9
Forest Research Yields By-Product—Maple Syrup ............... 10
Countryman Capsules .................................................... 11
The College of Agriculture—Past, Present, and Future ........ 12
Alumni ............................................................................. 13

Staff

Editor-in-chief ................................................................. Jay Brodell '64
Managing Editors ......................................................... Michael Whittier '65 and Wade Nye '65
Circulation Manager ...................................................... Peter Monnier '65
Librarian ........................................................................ Susan Isler '65

Freshmen: Marjorie Case, Donald G. Semmler, and Brenda Corlett.

Cover—Schwellkopf Stadium in winter by Professor F. A. Pearson, New York State College of Agriculture.

The Cornell Countryman is published monthly from October through May by the New York State College of Agriculture, 490 Roberts Hall, Cornell University, Ithaca, New York. Second-class postage paid at Ithaca, New York. Printing by Norton Printing Co. of Ithaca. Subscription rate is $1.75 a year or two years for $3.25; three years for $4.50; single copies, 25 cents. A member of Agriculture College Magazines Associated. Represented for national advertising by Littell-Murray-Barnhill, Inc., 369 Lexington Avenue, New York 1, N.Y.
Administrators, staff, and students of the College of Agriculture are expected to learn the results of a follow-up study of a three-point proposal for unifying biological science at Cornell.

The present study is based on a report submitted to University President James A. Perkins, in which a new school or college of biology was recommended for Cornell. Also in the report were suggestions that procedures be revised for filling faculty tenure positions in biological science and for the selection, supervision, and examination of graduate students.

The committee which made the report was chosen from outside the Cornell community last fall by President Perkins. Its work is being studied by a committee of faculty members headed by Provost Dale R. Corson in an effort to evaluate the proposals and their practical applications. Results of the study are expected to be submitted to President Perkins March 1.

The proposals are of particular interest to persons associated with the College of Agriculture, where, the report notes, "work of a biological nature is found in virtually every department."

In presenting its report to President Perkins in late October, the committee observed that "the most striking feature of biology at Cornell is that bits and pieces are scattered throughout many of the separate departments of five of the schools or colleges which compose the University." In addition, the committee found that "in not one of these places does it present itself as a more or less coherent and integrated body of knowledge."

As a partial explanation of these findings, it was stated that "perhaps the single most important cause is to be found in the fact that much research in biology has been valued primarily for its immediate contribution to the solution of practical problems in Agriculture and Veterinary Medicine." Similar applied forms were found elsewhere.

In calling for a unification and upgrading of biological science at Cornell, the committee told President Perkins that "biology must be seen at Cornell as a body of knowledge worth pursuing for its own sake and not merely as a series of adjuncts to the raising of larger crops, the improvement of industrial processes, or the training of premedical students."

In a summary recommendation, the committee suggested that "an entirely new school or college of biology be established to assemble in one place representatives of the fragments of the subject now scattered over the campus together with new appointments in areas of biology now inadequately represented."

The proposed unit would be expected to include such subjects as zoology, botany, microbiology, genetics, biochemistry, developmental biology, ecology, physiology, molecular biology, evolution and modern biostatistics, and certain aspects of higher behavior, although not specifically as departments.

The committee suggested that some of these groups would move into the proposed unit. "In other instances, only a portion of the personnel might be transferred and, in still others, joint appointments between the new division and existing departments might suitably be arranged." President Perkins reportedly favors the latter system.

It was observed that shifting segments of the faculty into the proposed science section would "admittedly result in some immediate loss to Agriculture." The committee stated, however, that "We feel... in the long run, the advantages of having strong representation in every important field of modern biology on the Cornell campus would greatly outweigh the temporary disadvantages." The committee added, "Indeed, some of our consultants expressed serious worry over the possibility that the present pattern of support for biology in the College of Agriculture is inadequate for modern conditions, and that it (the College) may lose some of its international standing if it does not encourage biological work on a far broader basis than in the past."

While studying the condition of biology at Cornell, the committee said, "... that in recommending changes in the present administrative structure, we have given, if anything, more attention to the future welfare of Agriculture than to that of any other unit of the University."

From a student standpoint, the committee felt that the proposal would help to eliminate certain presently adverse conditions. An example is in the preparation of students for medicine. The committee said that, although students planning to enter medicine generally prepare through the College of Arts and Sciences, where the department of zoology appears primarily concerned with pre-med students and "service" courses for other parts of the University, students in the Colleges of Agriculture and Home Economics "can obtain a perfectly good premedical education at much less cost."

It was noted that none of the colleges mention this in their bulletin and there are no advisers for this type of training in the state supported schools.

The committee indicated that biological sciences at Cornell are likely to suffer from something akin to malignant inbreeding unless the graduate education programs are revised.

It was found that "something like fifty per cent of the members of at least one of the college faculties are Cornell trained." The committee urged revision or modification of the practice of a faculty member preparing a graduate student in a subject and then passing judgment on his qualifications. In correcting this practice, the committee stressed that the students should be examined by authorities outside the Cornell environment as well as University staff.

It was felt that the results would be stronger background in the graduate student's field accompanied by more exacting diversity.
Rock and roll music filled the air. Everyone was having a fabulous time. What a party! What a weekend! Meanwhile, an uninvited visitor in the fraternity parking lot was singing a similar tune: "What a weekend! All of these cars filled with loot. This is like taking candy from a baby." The party-goers were unaware that coats, suitcases, pocketbooks and other items were being taken from their cars. Suddenly a voice rang out, "This is the Campus Patrol. You're under arrest." The looter's party was over.

Everyone at Cornell knows the Campus Patrol. "C.P.'s, yeah, they give parking tickets." How many people know what the C.P.'s do besides giving parking tickets? To find out, I talked with Mr. J. M. Herson, supervisor of Security and Safety for the University.

The Campus Patrol was established by a directive in Section 5708 of the New York State education law in 1865. Its purpose was to protect the property and persons of Cornell University. According to Mr. Herson, until the 1930's this amounted to little more than watchman activities.

Since its beginning the Campus Patrol has grown into a police force. The C.P.'s have a community of nearly 12,000 students to protect. To do this they have 22 full-time patrolmen, 38 part-time patrolmen, two plainclothesmen, and seven radio cars. Headquarters for the organization is Day Hall.

Although traffic control and parking regulations account for the largest amount of their time, the C.P.'s also have several other responsibilities. Any crime or violation taking place on campus is under their jurisdiction. Perhaps their most important single duty is giving aid in an emergency. Emergencies occur in many forms ranging from an injured athlete to fire in a dormitory.

The Campus Patrol works hand in hand with the Ithaca and Tompkins County police force when they need each other's help. If an accident occurs off campus, city police may ask the C.P.'s for aid. The converse is true when trouble breaks out on campus.

Often the Ithaca police turn Cornell student violators over to the C.P.'s, even though the offender's act took place outside the jurisdictional limits of the Campus Patrol. For example, a Cornell student might cause a disturbance after drinking too much, and might be booked for intoxication if arrested by the Ithaca police. Both the Ithaca police and the C.P.'s feel that it is better for a student to be sent to the university proctor or disciplinary committee rather than have a police record. This doesn't mean that a Cornell student can't be arrested by Ithaca Police, however. The exchange process is practiced with minor offenses only. If a student is involved in a serious offense, he is subject to the same treatment any other offender would receive.

On campus, the C.P. is known for giving parking tickets. The first ticket is a $5 fine. The second and third tickets, however, are $10 fines with loss of driving privileges for 30 and 90 days respectively. These measures might seem too severe, but there is a good reason for them. The Cornell campus has about 2,000 parking spaces. At the same time, there are 4,000 cars belonging to staff and faculty members and about 9,000 when student vehicles are included. If the penalty for illegal parking were a weakly enforced $2 fine, we'd have to walk around campus on car rooftops!

Another role of the C.P.'s which deserves special mention is the job they do on party weekends. Such a weekend may be enjoyable for participants, but it means work and little sleep for the C.P.'s, who direct traffic all hours and are prepared for any emergency.

One thing that troubles C.P.'s but goes relatively unnoticed by most Cornellians is the number of thefts that occur on special weekends. Mr. Herson says that most thefts are not by Cornellians, but by visitors.

Having patrolmen at parties is an innovation of the C.P.'s that has greatly decreased the number of thefts. For a nominal fee a fraternity, or any campus organization, can secure the services of a patrolman. This relieves the organization of much responsibility in enforcing security measures during parties. Often, just the presence of a patrolman prevents incidents. This practice works so well on campus that many public bars in Tompkins County have adopted it, and are pleased with the results.

The Campus Patrol has the responsibility for protecting a population large enough to be classified as a small city. Just as a city could not exist without dedicated men to enforce its rules, Cornell University could not function efficiently without its Campus Patrolmen.
BUFFALO, New York, boasts a part of Cornell University. It is the Cornell Aeronautical Laboratory, a non-profit, independent research laboratory. It has been a subsidiary of Cornell University since January 1, 1946. The building was owned by Curtiss-Wright during World War II. When the war ended, Curtiss-Wright gave the building and research facilities, including a wind tunnel, to Cornell University. President Perkins is chairman of CAL's board of directors, and University provost, Dale Corson, is on the Executive Committee.

CAL employs about 1200 people. About 500 are engineers, or scientists. The rest are technicians, and the administrative and clerical staffs. The Laboratory has undergone moderate growth, and the opinion of the administration, as reflected in its policy, is that there is no real advantage to size alone. Also, CAL's contracts supplement and advance its internal research program; the Lab is concerned with general scientific advancement as well as pursuing contracts.

About 90 per cent of CAL's business is with the government. Much of this research is military, and classified. This fact accounts for the elaborate precautions taken with visitors. A guard meets you at the gate, and finds out your business at the Lab. Once inside the front door, you are asked to sign a register with name, group represented, and country of citizenship. You then receive a visitor's badge. Visitors are always under escort.

CAL does about $17.8 million in research business each year. At least 190 projects are being researched at all times. The Lab is considered a leader in the field of hypersonics, of flight above the speed of sound. It pioneered testing devices, when it became obvious that ground testing was no longer possible in this age of hypersonic flight. A recent CAL development is the Wave Superheater Hypersonic Tunnel. This is a hypersonic test facility, which duplicates the environment of a low altitude, high velocity flight. This device is now in use for air in flight simulation.

Although there is a fee attached to CAL's contracts, the term "non-profit" applies to the Lab. The money is spent in new capital equipment and on company sponsored research. This type of research institution, being non-service sponsored, with no product to sell independent of industry has advantages. CAL researchers are objective, and free to follow any research idea submitted, without view to corporate gains. CAL brings to its contracts an outside, unbiased viewpoint. This center for applied research is also a real asset to Cornell University, since it allows scientists here to proceed with research in pure science, while remaining in contact with current progress and developments in industry, through CAL. Reports of research projects are made available to the public upon request, if it is authorized by the project's sponsor.

Many Cornell undergraduates are not aware of the Lab's existence, and most know very little about its functioning. However, CAL's connection with the University is very real.

The Lab sponsors two professorships at the University. These professors also instruct members of the Lab's staff, flying to Buffalo one day a week to lecture. CAL and the University work together on basic research programs of interest to both. The CAL program aims at applying new techniques derived through this research to space-age problems.

CAL provides about $60,000 annually for ten graduate fellowships at Cornell University. The Lab began sponsoring these fellowships in 1949, as part of the CAL Research Associate Program. This program provided that each company which had donated $5,000 or more to CAL during its early years would have a fellowship given in its name by CAL. Initially, there were six of these, and four additional fellowships given by CAL. At the end of the Research Associate Program, the fellowships were renamed. They are now given in the fields of aeronautical engineering, electrical engineering, business and public administration, and to a student enrolled in R.O.T.C. Two other fellowships are given in undesignated fields. This cooperation with Cornell University has made CAL not just a subsidiary, but a valuable asset to the Ithaca campus.
International Interviews On
The Upper Campus

by Toni Gailey '65

How many foreign students do you know? “Not many,” is the usual answer. Crowded schedules often limit acquaintances to lab partners or the fellow at the next desk, yet most Cornellians would like to learn more about their foreign classmates, even if they can’t meet them.

The College of Agriculture’s 1963-64 enrollment lists 216 foreign graduate students and 80 undergraduates, only four of which are women. The 80 undergraduates represent 31 nations and a geographical distribution which reaches from the foothills of the Himalayas, to the south Pacific, and nearly to the Arctic Circle. These undergraduates have earned recognition in several fields. Machooky (Kenya), Bosu (Nigeria), and Gilmour (Australia) are familiar names to Cornell track and swimming fans, and 13 of the 25 Canadian students hold positions on Cornell’s freshman or varsity hockey teams. Uri Mingle (Israel) was awarded the 1963 Alpha Zeta Scholarship Key for his 94.38 freshman average.

Changing from British to American educational systems is the biggest problem foreign students encounter. Some are hindered by language difficulties, some find American food strange and hard to get used to, and others find Ithaca’s weather a drastic and unpleasant change from their native climates. Most foreign students, however, consider these problems minor ones. In general, they are impressed with the opportunities available to them in the College of Agriculture, and are proud to be Cornellians.

Keng Bin Lee
Souzana Sotiracopoulos

Keng Bin Lee ’64 Malaya, is working toward a degree in general agriculture which, he feels, will provide a strong background for future work in Malaya’s predominantly agricultural economy. He has worked with Malaya’s Rubber Research Institute, which is concerned with both large plantation management and helping smaller producers. Of Malaya’s 400 million acres in rubber trees, only two million acres are classified as small holdings. Keng Bin Lee has also worked with Malaya’s well-organized extension service, which is very active in giving practical aid to the small holders. Extension agents go from village to village conducting demonstrations and holding competitions as part of educational programs that encourage the adoption of new yield-increasing practices. Rubber is Malaya’s chief cash crop, but prices are uncertain and the government is considering a program that will promote agricultural diversity and perhaps create more interest in the oil palm, another cash crop with good expansion possibilities.

Keng Bin Lee became interested in Cornell through a Cornell graduate who is now a rubber broker. He finds Cornell’s facilities “amazing—especially the libraries. The opportunities are unlimited,” he says. “With the libraries, the other excellent facilities, and the many qualified people to give help, anyone who wanted to advance himself could always find a way.”

Keng Bin Lee is from Singapore, a city slightly larger than Buffalo, yet he doesn’t find Ithaca too small a town, and doesn’t really mind the weather. What he really misses, he says, is his car.

Souzana Sotiracopoulos ’64 Greece. Before coming to Cornell, Souzana Sotiracopoulos worked in Canada as a medical technologist, and intended to follow up that interest at Cornell. “I had always thought of agriculture as strictly farming,” she says, “never as applied science.” Interested and guided by several professors, she changed her major to plant pathology. “I don’t regret switching to the College of Agriculture at all,” she says. “With the background I’ve gained here I feel equally qualified to work in either research or agriculture.”

In general, Souzana is enthusiastic about the educational opportunities at Cornell, although she has a few complaints. “I detest fill-in-the-blank questions,” she says, “and it is hard for me to give short, quick answers when I am used to longer essay exams.” She thinks the advisor system is marvelous. “But, then, I have a wonderful advisor,” she adds. “To be able to talk to your advisor on the same level, to tell him what courses you’re going to take—that is really something.”

Cornellians’ freedom of choice and the interest and cooperation shown by professors is “unique,” says Souzana. “Even the most elementary course is up to date.”

Souzana’s first visit to Cornell wasn’t her first trip to the United States, but it was still a surprise. “I knew Cornell was in New York,” she explains, “and New York meant New York City to me, as it does to many foreigners. I never expected such a big univer-
sity to be in such a small place.” Souzana thought she might be lonely at first, but was soon too busy to think about it. “I would like to come back after I graduate,” she says, “when things are less hectic and I could enjoy the beauty of the campus and the Ithaca wilderness.”

Felix Moukoko Ndoumbe ’64 Cameroon, is majoring in agricultural economics and plans to work for the Cameroon government, probably in an agricultural planning department, after graduation. The courses he takes at Cornell emphasize problems different from those he will encounter at home, but Felix feels that the principles can be transferred with little modification.

Cameroon is on the west coast of Africa not far above the equator. Felix lives in Douala, a city about the size of Rochester and, he says, one of the most humid in the world. Heavy rains are common in the southern part of Cameroon, and the roads are blacktop or occasionally brick. Felix finds roads in New York and the United States “marvelous” in finance and construction. He doesn’t like toll roads, but “financing roads from gasoline taxes is much better than having the money come from the government’s general budget,” he says, and he prefers concrete to blacktop.

“Here the roads are really built.”

Denis Hourihan ’67 Ireland, is from County Cork, a big dairy county. “It can’t be compared with New York,” he says, “because dairying isn’t so specialized in Ireland—we have much more mixed farming.” Holsteins are the most popular dairy breed, he reports, with Shorthorns becoming less important each year. Further north, beef and Herefords are emphasized.

Denis is majoring in animal husbandry and would like to go into veterinary medicine. He feels that the practice requirement is an excellent opportunity, and probably offers him more practical experience than he would get at home.

Gerardo Ravassa, Columbia, is majoring in wildlife conservation, and is most interested in fisheries and stream conservation. He lives near the foothills of the Andes, where the year-round temperature is 75°-80°F.

Studying at Cornell is quite a change from the British system Gerardo’s used to, “but,” he adds, “it’s even different from American University in Washington, D.C.” Like most foreign students, he doesn’t like multiple choice questions. “Sometimes the answers are like splitting hairs.” Like most Cornellians, he would like to have “about 10 more minutes” on each exam.

Geoffrey Aganaba ’66 Nigeria, comes to Cornell through the A.I.D. scholarship program. He is majoring in animal husbandry, and when he returns to Nigeria, he will probably work as an extension agent or teach vocational agriculture. He, too, is against multiple choice questions. He speaks English well, but reminds us that it is a second language, which understandably makes multiple choice questions and note-taking more difficult. It takes about a semester to get oriented, he says, and “the best orientation comes from talking to older boys.”

“I don’t like the weather at all,” says Geoffrey. After southern Nigeria’s 60°F winters, Ithaca is “extremely cold.” Although the cold “makes room for studying long hours,” it is still “very trying” for one who is used to frequent outdoor exercise. At home, Geoffrey likes to play lawn tennis or watch a soccer match after work.

Peter Gilmour ’65 Australia, would like to have a sheep station (ranch) and raise Corriedales or Merinos, depending on the location of the station. He is majoring in agricultural economics, and “right now,” he says, “I probably know more about American agriculture than I do about Australian. The State (Victoria) Agricultural Department told me it would take about a year for me to get oriented when I go back.”

“I had never seen snow before,” says Peter. Southern Victoria has fairly mild winters and quite a lot of rain, he reports, “I like the snow, and at least you don’t get wet.”

Comparing Cornell with Australian universities, Peter says, “At Melbourne University you would take five courses a year. At the end of the year you would take one set of finals, for which the grades would be Pass, Fail, or Honors. It busts out quite a few, but it makes students more serious about their studies than they may be here. It’s too easy to cram the night before a prelim and have a fair chance of passing it.”

One point that Peter feels strongly about is the contrast between American tourists and Americans he has met on their home ground. “Most U.S. tourists frankly give a poor impression,” he says, “yet everyone I’ve met here has been very friendly. I was really amazed.”

Areas colored black represent foreign nations with undergraduate students in the College of Agriculture.
CA STORAGE:

Ever wonder where that apple you eat in spring comes from, or why it's still so red and juicy? No, it isn't from Florida or California. It was grown right here in New York State, and strangely enough the practice that makes it possible for you to eat apples in March is the same one that will allow the United States to put a man on the moon.

In the space industry they refer to it as a sealed environment system. The same thing in the apple trade is called controlled atmosphere (CA) storage. It all has to do with the business of breathing.

When the astronauts blast off on their journey to the moon, they will carry with them a device for maintaining the atmosphere in the cabin of their rocket as close as possible to what it is here on earth. Apples in storage, like astronauts in space, need oxygen to sustain life. However, the amount of oxygen needed by each of them is somewhat different. For full efficiency, the astronauts will require from 80 to 85 per cent saturation of oxygen in their blood. A cabin atmosphere consisting of from 20 to 60 per cent oxygen at a pressure equivalent to 18,000 feet altitude is considered by experts to be sufficient. This percentage is three times higher than the percentage of oxygen at sea level. For apples the situation is reversed. The oxygen content is lowered instead of raised. First the temperature of the apples is dropped to around 40°, just above the freezing point of water. Since apples are 85 per cent water, they must be kept above 32° or else they would freeze. Next the amount of oxygen around the fruit is lowered from the normal 21 per cent to around three per cent. Both of these practices slow down the respiration (breathing) rate of the apple to a point where they could hardly be said to be breathing at all. This lowering of the respiration rate causes the apples to ripen slower, and consequently they can be kept longer than in regular cold storage.

Apples are also like astronauts in that they are intolerant of high concentrations of carbon dioxide. The maximum amount apples can withstand is in the same range as for astronauts, somewhere between three and five per cent.

One other factor which must be controlled in any sealed environment is relative humidity. Both man and fruit lose water in these systems. In the space vehicle the loss of water is not too serious since the astronauts can replace the liquid lost by their bodies. In the case of apples the loss is irreplaceable and of serious consequence for the grower who sells his apples by the pound.

What does all this mean in a practical sense? Well aside from the prestige our country would gain from a moon shot, it is calculated that by the end of the 1960's CA storage in this country alone will amount to something like 20 million bushels. At a dollar more per bushel this means additional revenue to the tune of twenty million dollars to American growers. The extra dollar per bushel comes from the fact that the grower can keep his apples in storage longer and put them on the market at a time when competition is less keen.

The idea for CA storage originated in England and was brought to this country in the early 1940's. Its success in this country is due largely to the efforts of Dr. Robert M. Smock of the pomology department at Cornell who did most of the early work on CA storage. Dr. Smock and the pomology department still maintain three experimental CA rooms at the University orchard where they not only keep abreast of all the latest developments in the field, but manage to turn out those juicy red apples Cornellians like so well.

Dr. Robert Smock in the controlled atmosphere store room.

Apples and Astronauts

by Conan Mooney '66
Bird Tracking
Simplified By
Transmitters
by Susan Isler ’65

The Cornell Laboratory of Ornithology has a new method for tracking the homing flights of birds. These flights, which are made every season or every year back to the same place, have been an object of investigation for many years. You have all seen or heard of bird banding and bird coloring during migration. Researchers had to rely on marked birds being reported by the public. But the new Cornell method is self-sufficient and accurate. The research for this new method is being done by Mr. William Southern at the Sapsucker Laboratory of Ornithology.

Although there has been a great deal of research done in the field of bird migrations, this work had always been limited to simple observation of the bird species both before and after migration. Researchers could record the time of departure and return, the length of time the bird was gone, and its direction of flight. But there had been no way to follow and plot the course of the bird during the trip.

Recently, however, a high frequency transmitter has been developed for navigation studies. This new method is being used as a supplement to bird banding and bird coloring to track birds during migrations. These transmitters are individually constructed by Mr. Southern so that each one is slightly different and they are placed on the bird’s leg when it is banded. There are two types of transmitters: the continuous wave transmitter and the pulse signal transmitter, which can be adjusted to put out a certain number of “beeps” per second. These “beeps” may be used separately or in a combination which makes it possible to equip up to one hundred birds with different signals that last for a period of six months.

After the investigator attaches the transmitter to the bird, it is released. He does not have to rely on being able to see the bird take off. He just takes his receiver and records the signals sent by each small transmitter. The direction of the bird can be traced and its position can be calculated by triangulation. The researchers have been able to plot the position of the bird within one degree of its actual location. The whole course of migration can be followed for each bird and guesswork is completely eliminated.

Two kinds of receivers can be used to track the birds with transmitters. One is small enough to be carried by an investigator in the field and is particularly useful when the bird is not travelling very far. There is also a mobile unit, installed in a car or truck, which operates under a two-man team to trace the journey of migratory birds that cover a large area. The equipment used by Cornell researchers has reached a distance of 30 miles but has the potential for tracking 270 miles.

This equipment, however, is not limited to tracing the paths of birds in flight. It can also be valuable in the study of bird behavior. Small adjustments in the transmitters will make them sensitive to different stimuli. For example, it is possible to tell when a bird is preening or eating by the signal coming back to the receiver. Since each transmitter is made individually, it is a relatively simple operation to wire it to pick up physiological data from the bird, like its heart beat and blood pressure. It is equipment similar to that used to obtain information about astronauts during flights, only on a smaller scale.

The transmitters are not limited to bird migration studies. They can be invaluable in the study of small mammals and reptiles. In this case, the equipment need not be as small as that used for birds. For the larger species, the transmitter is attached to a collar which acts as the antenna, giving the unit longer transmission life and greater range. That used for deer may be effective for many miles and up to two years. In Montana, the high frequency radio unit is used to track grizzly bears. The Navy is conducting albatross migration studies with the equipment in the South Pacific. In New York State radio tracking has been used for small mammals and deer. The small mammal studies began as part of an investigation of the transmission of rabies among these animals.

Researchers in this field had previously considered the possibility of radar to study the navigation of birds. They found that the equipment was too expensive for small research groups. Also it did not allow the study of individual birds, because the individuals could not be distinguished from a larger group. They simply had to wait for technology to provide the answer—the transistor tube.

The research in this field of navigation studies by high frequency units has just begun. It opens many opportunities for the ornithologist, the biologist, and others to not only study the migration of species, but also the behavior and physiology of animals outside the laboratory environment.
Cornell's towering elm trees are a landmark known to every student and visitor. Now and then one is chopped down, but no one ever stops to realize why. The trees that are disappearing one at a time are infected with the Dutch elm disease. The results of this disease are always fatal.

What exactly is this disease and why has it appeared only in this century? The disease is caused by a fungus which is carried by bark beetles. The bark beetle first appeared in the United States about 1905, but did not then carry the fungus. Beetles carrying the disease appeared shortly after the first World War. The fungus was unknown in Europe until that time, and shortly after it appeared there it was observed in the U.S.

The European elm bark beetle and the native American elm beetle carry the disease in the U.S. The life cycles of these beetles are important, because without them there would be no transportation of the fungus. The fungus lives in living and dead elm material and is carried there by the beetles. Once in this environment, the fungus reproduces rapidly.

The European elm bark beetle has two broods—one in the spring and the other in summer. The spring brood is the one that causes the immediate damage. During the winter this brood, which is partially developed, lives in the bark of an elm which is dead or dying. In the early spring they complete their development and emerge as winged adults. They feed by chewing on twigs. Fungus spores are rubbed off the beetles and left on the damaged twigs. The damaged tissue on the twigs causes exposure of water-conducting tissues. The fungus then grows in the tree's vascular system and blocks the movement of water. Thus, the tree wilts and dies.

After the beetles feed, they search for places to lay their eggs, thereby spreading the infection.

The summer brood hatches and goes through a similar cycle. There is no evidence that this brood carries the fungus, and it has been proven that elm trees are not susceptible during this season. Therefore, the summer brood lays eggs that hatch in the spring and do the damage.

The native American elm bark beetle has a more complicated life cycle. Whereas the European beetle has two generations a year, its American counterpart has one-and-a-half generations a year. The winter is spent by both larvae and adults of different generations. The hibernating adults eat the disease transmitters after hibernation. The larvae hatch, feed, and lay eggs which produce the winter adults. Another distinction between the two beetles is that the native American elm bark beetle does not feed on twigs, but is found in small tunnels in branches and limbs.

The fungus is picked up in dead or dying elm bark where the beetles have bred, and then is transmitted. The fungus will grow in either diseased or healthy trees. It enters the trees' water-conducting systems and spreads throughout the plants.

The symptoms of the disease are extreme wilting, partial defoliation, dead branches and abnormal twigs or short growth. By cutting into a branch of an infected tree, one can see the streaked and discolored wood.

To stop this fatal disease it is necessary to remove all infected trees and destroy all the wood. The dead wood lying on the ground should also be destroyed as beetles hibernate there.

This is why the elm trees on Cornell's campus, and in many other places throughout the country, seem to be mercilessly destroyed. By removing and destroying those that are infected, the other trees may have a chance to live.

Spraying to protect wood from the beetle is also employed to stop the migration to other trees. The Cornell Division of Buildings and Grounds is using both spraying and eradication to preserve the Cornell elms.

Below: European elm bark beetle (l), and larva (r), potential carriers of Dutch elm disease.
CORNELL'S MILITARY TRADITION

by Owen Wavrinek '65

Instruction in the military sciences has been provided at Cornell University since 1868. Before World War I, the War Department assigned an officer to help train students on campus. This training required living more as military personnel than as students. Marching units and uniforms gave the university something of a boot camp appearance.

Although the importance of military science has always been recognized at Cornell, it has not been overemphasized. University policy states that it “was not founded for the purpose of educating soldiers, but it can imbue citizens with all that is good in soldiers and fit them to be soldiers in time of need.”

The Reserve Officers' Training Corps (ROTC), as it is today, was created in 1916 under the National Defense Act. The program proposed to “select, educate, motivate large numbers of college trained officers for an incentive reserve force.”

Cornell, being a land grant institution, was required to offer military education. It was one of 37 colleges to first organize ROTC units. All of these units were Army ROTC until 1926 when Naval ROTC units were established. The Air Force organized its ROTC force in 1949.

The ROTC programs have given college students the chance to enter the armed services as commissioned officers. The completion of basic and advanced courses, and mental and physical fitness, are prerequisites for such a commission. The graduate’s leadership abilities are developed and put to an important use.

The Army ROTC program has been training Cornell men since 1921. The cadet enrolls in a four year program, spending his freshman and sophomore years in a basic course and his junior and senior years in an advanced course. The basic program offers instruction in U.S. Army military history, policy and problems, weapons and marksmanship, and individual and small unit tactics. An understanding of national defense problems is sought. Freshmen and sophomores spend one and two class hours per week, respectively, on military science. All are required to participate in one hour of weekly drill and leadership training. The advanced program is not required by ROTC, but qualified cadets are urged to finish out the last two years. Once the decision to continue is made, an agreement to complete the program and a six week summer camp must be signed. Juniors and seniors are scheduled for three class hours and two drill hours each week. Graduation leads to a commission as Second Lieutenant.

Air Force ROTC at Cornell also offers two years each of basic and advanced military instruction. First semester freshmen spend two hours per week in class. The foundations of aerospace power and the Department of Defense are emphasized. Second semester freshmen and first semester sophomores satisfy Air Force requirements with three hours of specific university subjects. The second semester sophomore spends two hours per week on the fundamentals of aerospace weapon systems. In addition, all students in the basic course must attend one hour of drill per week. As in the Army ROTC program, the Air Force advanced program is not mandatory and an agreement must be signed with regard to its completion. A four week summer camp is included. Four hours per week are spent on military or university subjects. The first and last semesters of the advanced course are spent in the Air Science classroom. Two hours of drill per week complete the course. Air Force ROTC prepares cadets for commissions as Second Lieutenants. Unless trained as pilots or navigators, who spend five years on active duty and two years on reserve, graduates serve four years of active duty and two years in the reserve.

The Naval ROTC program prepares students for the U.S. Navy and Marine Corps. Enrollment consists of regular and contract students. To qualify for Regular NROTC, national competitive exams must be taken in the senior year of high school and the results submitted to state committees. This program is geared toward those interested in a naval career. Contract students are selected on campus during Freshman Orientation Week by the Professor of Naval Science at Cornell University. Regular and contract students are not separated but receive the same instruction. Courses offered are the same for both Navy and Marine Corps during the first two years. There are three one-hour classes and a one-hour drill per week for each student. At least some credit is given by all colleges at Cornell for Naval Science courses. Following the junior year, a six week summer training cruise is taken by those who stay in the program. Contract students receive an allowance of about $27 a month, as is the case in advanced Army and Air Force ROTC. The NROTC graduates are commissioned as officers in the U.S. Navy or U.S. Marine Corps.

ROTC units drill in Barton Hall.
The collection and refinement of maple sap is the main order of business at the Cornell department of forestry's laboratory in the woods, Arnot Forest. In addition to research conducted there, the forestry department's lab produces over 300 gallons of marketable maple syrup each spring. This is sold at Fernow Hall and adds another small business to the list of those conducted as a by-product of Cornell research.

Arnot Forest is located about 18 miles south-west of Ithaca. Its 4000 acres are at an average elevation of 2000 feet above sea level. At the center of this vast laboratory is a small sugar house or sap house in which the maple sap is refined to make syrup. This process involves the slow boiling of the sap to concentrate its natural sugar content of 2 per cent so that it equals exactly 66 per cent. Forty-three gallons of sap are needed to produce one gallon of syrup in this way.

Since its establishment in 1957, the sugar house and the entire maple syrup collection and production process have changed to a great degree. Modern methods and the immediate application of the ideas gained through research allow the Cornell syrup factory to produce as much or more maple syrup per year than the average New York State operation, even though relatively poor conditions for sap production exist in most of Arnot Forest.

For example, instead of hanging sap buckets on each tree, experimenters have developed a system whereby sap is piped from the trees in plastic tubes and collected at a centrally located bulk tank. This system makes collection easier and increases production by reducing the action of bacteria on the sap. Vacuum pumps are also being used experimentally to collect sap. The sap from twenty trees can be collected at one stop using this system thereby reducing the amount of labor required to collect a given amount of sap. Tubing is either laid on the ground or hung from the tree trunks. Unless the expensive vacuum equipment is used the tubes must be arranged to allow a downhill flow. The only serious problem with this system arises when the tubes become clogged or the sap within the tubes freezes. The use of this tubing is comparable to the introduction of the pipeline milker to the dairy industry, both in its effect on the industry and its basic principle of operation. The use of tubing has proved so helpful that in 1963 almost all the sap in Arnot Forest and 40 percent of that gathered in New York State was obtained in this way.

Other factors involved in maple sap production are also studied at Arnot Forest. Two of the Experiment Station Bulletins published as a result of such research are: Influence of Tree Crowns on Maple Sap Production and Influence of the Number and Depth of Tap Holes on Maple Sap Flow, both written by Professor Robert R. Morrow, director of research at the forest.

Professor Morrow notes with pride the improvements which have characterized the Arnot Forest operation in its seven year history. For example, the number of tap holes has risen from 700 to 1100 through the use of plastic tubing for collection and the installation of vacuum pumps. The sap house has been greatly enlarged, a new and larger syrup producing evaporator has been installed, and electricity has been added.

The operation now represents a $500 investment or about $4.50 per tap hole. As a direct result of these improvements, production of maple syrup has almost doubled, quality has greatly increased, labor hours per tap hole have been halved. Returns per hour have nearly doubled.

These improvements have resulted from only seven years of Cornell research and they are important not only because of their valuable effect on the Arnot Forest operation, but because when applied throughout the state they will be of help to all producers of maple syrup.

Ideas are the main product of this outdoor laboratory but let us not forget all that delicious maple syrup!
Members of Cooperative GLF Exchange, Inc., and Eastern States Farmers' Exchange, Inc., will be asked this month to vote on a proposed consolidation of their cooperatives.

These organizations, two of the oldest farmer cooperatives in the nation, are regional cooperatives which provide purchasing and marketing services for farmers in a total of 12 states: GLF in New York, New Jersey and the northern tier counties of Pennsylvania; Eastern States in the rest of Pennsylvania, the six New England States, Delaware and parts of Maryland and Ohio.

More than 100,000 members in each cooperative will vote, according to Eastern States President, Jonathan Davis of Sterling Junction, Mass., and GLF President, James C. Corwith of Water Mill, N.Y.

A donation to the New York State College of Agriculture by Mrs. Floyd Mundy, Jr., of Scarsdale, N.Y., establishes the Cornell Plantations Wildflower Fund. Locating wildflowers in sites close to their natural settings will be stressed. The garden and trails will take advantage of the natural topography. The first plantings will be made this spring. Most trees and other plants now in the area will not be disturbed. Mrs. Mundy's husband is a Cornellian, class of 1928. They have consistently followed the development of Cornell Plantations.

Enrollment in "Operation Advance," an educational effort of the New York State Extension Service has passed the 60,000 mark, report officials of the State College of Agriculture. The purpose of the project is to help individuals deal more effectively with community growth and development, and education and world issues. Some 5,000 discussion groups have been organized in 40 counties. The groups, of ten to fifteen persons, will begin meeting in February and discuss a topic a week for four weeks. The topics are: "Community Growth and Development," "Education and the Future," "Resources—Land, Water, and People," and "World Tensions." Any citizen interested in community programs and problems is urged to join the project.

The College of Agriculture now offers construction plans to farm operators interested in building a machine shed with adjacent shop or living quarters. The first plan (No. 5849), details a storage section of economical pole-type construction. The second plan (No. 5841), helps to cut down initial building costs on new farms. The living quarters, consisting of two bedrooms, a bath, kitchen, and living room, may be converted for other purposes when a permanent house is built. The plans are available from county agricultural agents or from the department of agricultural engineering of the College of Agriculture.

The New York State 1963 growing season (May to September) was characterized by a serious lack of rain. A. B. Pack, State Climatologist of the U.S. Weather Bureau at Cornell, has stated that the rainfall was only 75 to 85 per cent of normal in most of the state. Two-thirds of New York had rain two to six inches below normal although many sections had deficiencies of six to nine inches. The Buffalo area, including Genesee and Wyoming Counties, was an exception to the rule and enjoyed a total of nine to eleven inches of rainfall between July and August 31. The worst month of the season was October, one of the dryest ever recorded in New York State.

Professor Stuart MacDonald Brown Jr., chairman of the department of philosophy, has been named dean of the College of Arts and Sciences at Cornell. He succeeds Professor William R. Keast, who has been named vice-president for academic affairs of the University. Professor Brown was chairman of the department of philosophy for the past ten years. He received his B.S. degree at Cornell in 1937 and his Ph.D. degree in philosophy in 1942.

A combination cherry-apple picker has been recently developed at Cornell University. The creation of this dual purpose machine extends the seasonal life of the harvester. It appears to be completely successful judging from preliminary evaluation of the fruit.

Researcher Sobel (l.) and Professor Ludington at work.

A major problem of great dimensions is under investigation in a special laboratory at Cornell University. Poultry operations have grown to such an extent that a medium-sized poultry house produces the same amount of waste as a city of 10,000 people, and all this comes from under one roof! Professor David C. Ludington, laboratory head, hopes that incineration will be the answer. A large tank system had been heralded as a possible solution. But it has been found that 90 per cent of the waste does not dissolve. This causes clogging. A. Theodore Sobel, research associate, sees their task as "trying to describe poultry waste in engineering terms."
Morton Adams, '33, is the Chairman of the Council for the New York State College of Agriculture and the Experiment Stations. He is President of Curtis-Burns, Inc. and general manager of Pro-Fac, a companion corporation. The following is a portion of a statement delivered at the semi-annual meeting of the Council at Cornell on December 3.

In his inauguration speech President Perkins made it crystal clear to all Cornellians and friends of Cornell, that the "time has come to review the past, examine the present, and plan for the future." He proposed that "we look to the next eighteen months as a period appropriate for the redefinition of our mission" as a university.

Within this framework, I will make a few personal and brief observations concerning the College of Agriculture—its past, present, and future.

Agriculture at Cornell has a tradition as old as the University itself. Some of the students in Cornell's first class studied agriculture. America's second oldest Agricultural Experiment Station started here in 1879. Seven years later—in 1886—the first Farmer's Institute was held at Cornell. Eighty-five farmers made their first pilgrimage to the University in response to professors' efforts to share their knowledge of agricultural science and to learn how farmers' interests might be served by New York's Land-Grant College. This and other Institutes were the forerunners of our present Extension Service.

From then until today, not only financial but other support for this world-renowned College has grown by leaps and bounds—and from many different sources. One of the principal reasons is that the College has always been close to the people. Its traditional and current policy of public service is broad and considerably different from the endowed colleges of the University. The uniqueness of the College lies in its potential to concentrate its vast research and extension resources to strengthen the very competitive, complex industry of agriculture and help solve the social and economic problems of individuals, families, and communities. For example, in the County Extension Service Associations in this State alone, the College directly serves more than 200,000 adults and youth who make up the membership of these Associations. This obviously is a much broader concept of public service by a university, than having a few faculty members act as consultants to state or federal agencies.

Just what is this modern, complex agriculture in our State? Its dimensions go far beyond the 80,000 farmers who are producing one-third more products on one-half as much land as in 1900, and have farm sales of more than $850,000,000 a year. In addition, our agriculture includes 2,500 firms which provide farmers with production supplies at an annual cost of $583,000,000. The food processing industry, of which I am a part, and the distributing and retailing of these agricultural products require the services of 70,000 firms with annual gross marketing services of $1,250,000,000 a year. This is modern agriculture.

The members of the College of Agriculture Council are representative of this dynamic, fast-moving agriculture. They come from all over the State—from farms, processing industries, marketing cooperatives, farm organizations, the banking industry, educational institutions, state and federal government agencies, and other organizations and fields. All these are a part of agriculture as we in New York State define our business. Yes, they represent all these support and leadership groups.

These Council members are also interested in the research data Cornell provides for them and their associates in agriculture. In fact, many serve on guidance or advisory groups which review the research in progress and help departmental research professors and project leaders make decisions as to the most important of research projects. Their companies and associations even help finance needed research.

The College has been, and continues to be, second to none in its four major dimensions—teaching, research, extension, and international agricultural development. Cornellians everywhere can be proud of its accomplishments at home and abroad. Its excellent faculty and the leadership it has shown in each of the four major areas of work have meant a strong, dynamic agriculture important to the economy of our State and Nation. If this agricultural industry is to remain strong, it must have a strong College of Agriculture.

Thousands of our capable, talented alumni all over the world are loyal to Cornell. Right now, the College of Agriculture enrollment is the largest in any college of agriculture in the land-grant university system—and, I might add, the best. The College has one out of every five students at Cornell. Why? One reason is that the College's programs and curricula have been designed for today's requirements. Another reason is that there is an expanding need for trained personnel in agriculture and industries allied with it. Agriculture and its related fields are waiting for and competing for the men and women who graduate from the College of Agriculture at Cornell because they have been trained to meet the needs of this age, not the last generation.

For the College to remain at the top in the future—as Dr. Perkins has said, "To excel in excellence"—it must continue to have the strong support of both the people it serves and the Cornell administration. We believe that one of the vital cogs in Cornell University's driving gear is the College of Agriculture, and, with the deserved support I have mentioned, it will continue to be in the years ahead.
L. L. CLOUGH, '29, 280 Kenwood Avenue, Delmar, N.Y., has worked with New York State Department of Agriculture and Markets since 1933 and has been the assistant director of Milk Control since 1944. He is also president of the Dairy Division of National Association of State Departments of Agriculture and secretary-treasurer of the International Association of Milk Control Agencies.

STANFORD C. BATES, '30, Box 71, Jackson-ville, N.Y., is now an operations engineer at GLF, where he has worked for 23 years.

GEORGE J. DINSMORE, '31, 3 Holley St., Auburn, N.Y., retired in 1959 after 22 years as a vocational agriculture teacher. He is a representative of the Hamilton Management Corp. and also has worked in soil conservation, farm credit, and science teaching. He is a member of Alpha Gamma Rho fraternity and assisted the class committee in his area for the 1963 Cornell Fund.

RICHARD PRINGLE, '32, USOM, APO 143, San Francisco, Calif., has been with the U.S. Army since 1948 and is stationed in South Vietnam. He formerly worked for the Extension Service in Cattaraugus, Seneca, and Schenectady Counties and later worked his own farm. He is a former business manager of the Cornell Countryman.

DONALD W. RUSSELL, '33, 601 Pixley Rd., Rochester, N.Y., is the administrative director of the Monroe County Sewer Agency. Mr. Russell has also been a dairy farmer. He is a member of four organizations advocating sanitation and the prevention of water pollution.

PHILIP M. WHITE, '34, Mecklenburg, N. Y., has been in partnership with his wife, '35, Nevettui Rezna, since 1935. They own the White Nurseries. Mr. White is active in many local organizations. He was a trustee of the Trumansburg Central School for 18 years and is commodore of the Ithaca Yacht Club.

WALACE E. WASHBON, '35, 114 Kay St., Ithaca, N.Y., has been in the Extension Service for 28 years. For six years he has been in the state leaders office. Out of a hobby started 15 years ago, has come Washbon's Directory of A-v Tested Holstein Sires, published by Holstein-Friesian World. The 1964 edition is due Nov. 1.

ELWIN KEECH, '36, East Second Street, Westfield, N.Y., is with the National Grape Cooperative. He has served successively as horticulturist, assistant secretary, and manager-treasurer. He is a former president of the Chamber of Commerce, director of the YMCA, and is active in many other groups.

RAPHAEL L. BELLINGER, '37, Woodside Dr., Watertown, N.Y., is an insurance agency manager for Jefferson, Oswego, and St. Lawrence Counties. He is a former teacher and dairy farmer. He is treasurer of the Jefferson County Extension Service Association.

ETHEL T. (VAN LOON) EWALD, '38, 138 West Park Avenue, Pearl River, N.Y., was employed in the Lederle Laboratories of the American Cyanamid Corporation from 1938-1959. She is active in local organizations. Her daughter, Gail, is now an undergraduate student at Cornell.

MRS. MARJORIE DEAN CORNELL, '39, John-sonville, N.Y., worked in a realty firm and then an advertising agency until her marriage in 1953. She writes that she has been president of the New York Division of the Woman's National Farm and Garden Association, that she is a life member of the Associated Country Women of the World. She was voting delegate at the Triennial Conference of ACWW in Melbourne, Australia, October 1962.

PAUL E. TURNER, '40, 249 Highland Avenue, Rochester, N.Y., spent four years as a district agricultural engineer in the Lake Plain Counties for Cornell University. Since then he has done county agent work in agricultural engineering in Monroe County.

GLENN D. NICE, '41, 33 Academy Place, Canandaigua, N.Y., has been in county agricultural work for 22 years. In 1957 he worked on his master's degree in education at the University of Florida.

RAYMOND C. RABERL, '42, Bovina Center, N.Y., owns and operates a Jersey farm. In 1946 he returned for an additional year. He is Delaware County Membership Chairman of the Farm Bureau, district secretary-treasurer of ADA and Dairy Council of New York, and 4-H leader of two clubs.

WILLIAM S. PENDERGAST, '43, 21 Randall Terrace, Middletown, N.Y., has held the offices of director, secretary-treasurer, vice president, and president of the New York State Association of Agricultural Agents. He is Orange County Agricultural Agent and also served in Erie and St. Lawrence Counties.

LEWELLYN S. MIX, '44, Center Street, Cayuga, N.Y., former director of Dairy Research at Beacon Feeds is vice-president and general manager of the firm. He is married to Constance E. Avery '48.

GEORGE H. MARTIN, '45, 4658 Clover Rd., Honeoye Falls, N.Y., is president of Dutch Hollows Foods Inc. He is also the secretary of Sunset Farms Inc., Newark, N.Y. and Waverly Creamery Inc., Waverly, N.Y. He is an active member of the Secondary Schools Committee of the Cornell Club of Rochester.

ERIE JAMES MILLER, JR., '46, 1152 Danby Road, Ithaca, N.Y., formerly an assistant County Agent, has been Cornell's wrestling coach since 1948. He is the lay minister of the United Church of Christ and is currently minister to the Caroline Valley Federation Church of Brooktondale, N.Y.

MARVIN M. WEDEEN, '47, 55 Coralyn Ave., White Plains, N.Y., is presently the assistant vice-president for sales at Deltown Foods Inc. He has previously worked in various capacities for Sealtest Foods Inc. He is a former president of the Cornell Men's Club of Schenectady, is a trustee of the Mid-Hudson Local 338 Pension and Welfare Fund, and is active on many other committees. His wife is the former Hannah Haas '47.

Although there are many unpublished responses to the recent questionnaires, feel free to submit any new alumni developments to the Countryman. Address changes should include both the new and old addresses. -Ed.
In six seconds a GLF Unico nylon tire gets enough brawn to take on four killers—heat, flexing, impact and moisture.

In that short time, a GLF Unico tire cord receives a precise amount of protective rubber coating. This tempering by Accu-Ray, an infra-red nucleonic measuring machine, gives the tire added strength to withstand shocks, bruises, and dangerous heat build-up.

It takes this kind of quiet muscle to do farm-sized chores, day in and day out.

For power, there's the Open Center Rear Tractor Tire with the grip and bite needed for more powerful traction and drawbar pull. Its companion, the Tri-Rib Front Tractor Tire provides maximum resistance to side slips.

For performance, there are a fleet of truck tires including the U-54 for low-cost-per-mile highway runs; the RFD dual purpose husky; the Grip-Spur for field and rough road driving; and the famous XBT (Xtra Bar Traction) for 100,000-plus miles of grueling wear on drive or trailer wheels.

For protection, there are the two champion snow, mud and ice tires—famous Redi-Grip and the new, low-priced Uni-Trac.

For pleasure, there are the super-highway-proved passenger car tires, Powercruiser and new Powerlux, with unsurpassed tread depth, width, construction.

For producers, there is the Multi-Rib Implement tire for free rolling farm equipment—with five ribs to prevent sideslip and to provide extra grip on hills and banks.

That's not all. GLF tires are guaranteed to give you worry-free original miles. Ask about the warranty and see for yourself.

As on any good team, each member of the GLF-Unico Tire line-up has a specific job to do... and does it flawlessly. You'll find this All-Farm line-up (including additional special types) at your GLF Service Agency. Put the team of GLF built-for-the-farm tires to work for you... today. Cooperative GLF Exchange, Inc., Ithaca, N. Y.
Art in the College of Agriculture ............... page 3
Electronics on the Ag Campus ............... pages 4 and 5

MARCH 1964
THE STATE COLLEGE
OF HOME ECONOMICS

INVITES YOU TO PARTICIPATE IN THE
Fourth Annual Institute for
Community Leaders

The American Consumer:
A Critical Appraisal

ALICE STATLER
AUDITORIUM

APRIL 30
9:30 A.M. - 3:30 P.M.

Six nationally prominent speakers will discuss the American consumer from several different points of view.

Dr. Helen G. Canoyer, Dean of the New York State College of Home Economics at Cornell University

Consumer Decisions: Rational or Irrational . . .
Dr. Eva Mueller, Program Director, Survey Research Center, University of Michigan

Is the Consumer Sovereign? Panel discussion
Dr. Gordon Bivens, Head, Center for Consumer Affairs, University of Wisconsin
Dr. Gwen Bymers, Associate Professor of Household Economics and Management, New York State College of Home Economics at Cornell University
Dr. Persia Campbell, Chairman of Economics Department, Queens College, City University of New York
Dr. George Hildebrand, Professor of Economics and of Industrial and Labor Relations, Cornell University

OPEN TO THE PUBLIC

New York State College of Home Economics
A Contract College of the State University
Cornell University
Our gasoline isn’t good enough for some people... us

We like to think that American Oil products are the best you can buy. And they are. We also like to think we can improve the quality of our products without increasing the cost to the consumer. And we do. Consistently.

A considerable amount of work is done in testing catalysts and searching for those which will help produce the types of gasoline our customers want at the price they can afford.

One of the people engaged in the research and development of our manufacturing processes is John Mitchell, 24, a graduate Chemical Engineer from the University of Texas.

The opportunities for bright young scientists like John Mitchell are virtually unlimited at American Oil. American Oil offers a wide range of new research opportunities for: Chemists—analytical, electrochemical, physical, and organic; Engineers—chemical, mechanical, and metallurgical; Masters in Business Administration with an engineering (preferably chemical) or science background; Mathematicians; Physicists.

For complete information about interesting careers in the Research and Development Department, write: J. H. Strange, American Oil Company, P. O. Box 431, Whiting, Indiana.

IN ADDITION TO FAR-REACHING PROGRAMS INVOLVING FUELS, LUBRICANTS AND PETROCHEMICALS, AMERICAN OIL AND ITS AFFILIATE, AMOCO CHEMICALS, ARE ENGAGED IN SUCH DIVERSIFIED RESEARCH AND DEVELOPMENT PROJECTS AS:

- Organic ions under electron impact
- Radiation-induced reactions
- Physicochemical nature of catalysts
- Fuel cells
- Novel separations by gas chromatography
- Application of computers to complex technical problems
- Synthesis and potential applications for aromatic acids
- Combustion phenomena
- Design and economics: new uses for present products, new products, new processes
- Corrosion mechanisms
- Development of new types of surface coatings.
IN THIS ISSUE

Operation Viewpoint .................................................................................................................. 2
Aesthetic Meets Pragmatic: Art and Agriculture ........................................................................ 3
Microwave Oven: "Hotter Heat" ..................................................................................................... 4
A Nose for Flavor ............................................................................................................................ 5
The Hotel Statler Built .................................................................................................................. 6
The Busy Dean of Students .......................................................................................................... 7
Telluride Association—A Tradition of Excellence ........................................................................ 8
Graduate School: What Does It Take? ......................................................................................... 9
Countryman Capsules .................................................................................................................. 10
Alumni .......................................................................................................................................... 11

Staff

Editor-in-chief .................................................................Michael Whirtier '65
Managing Editors ....................................................Peter Monnier '65 and Wade Nye '65
Circulation Manager ..................................................Susan Isler '65
Librarian ........................................................................Owen Wavrinek '65

Freshmen: Marjorie Case, Donald G. Semmler, and Brenda Corlett.
Senior: Jay Brodell.

Cover: Watercolor of a chipmunk painted by Fritz Hilton in The College of Agriculture's freehand drawing department.

The Cornell Countryman is published monthly from October through May by the New York State College of Agriculture, 490 Roberts Hall, Cornell University, Ithaca, New York. Second-class postage paid at Ithaca, New York. Printing by Norton Printing Co. of Ithaca. Subscription rate is $1.75 a year or two years for $3.25; three years for $4.50; single copies, 25 cents. A member of Agriculture College Magazines Associated. Represented for national advertising by Littell-Murray-Barnhill, Inc., 369 Lexington Avenue, New York 1, N.Y.
Farm equipment lives up to its design with the extra strength and endurance...the extra HARVESTPOWER of Link-Belt chain.

HARVESTPOWER to spare! It's built into every strand of Link-Belt chain. *Extra* capacity to withstand starting, shock, and dynamic loads...to provide the trouble-free transmission of positive power at that all-important time when it's really needed...season after season.

The superior HARVESTPOWER of Link-Belt chain is a result of many manufacturing refinements. These processes—which go beyond ASA dimensional standards—add up to chain that *excels* in strength and durability. Today, over 300 farm machine manufacturers are taking advantage of the extra measure of HARVESTPOWER built into Link-Belt chain.

Link-Belt offers industry's most complete line of drive and conveyor chains, chain attachments and sprockets. Also "bonus" services: application counsel, field analysis, laboratory service and others. These services multiply the value of Link-Belt chains, but not the price!
Leon B. Schachter, international vice-president of the Amalgamated Meat Cutters’ and Butcher Workmen’s Union of North America, will speak at 11 a.m. Mr. Schachter, a resident of Camden, N.J., was a former United States labor attaché in Turkey. Recently he was a member of the United States delegation to the Food Products Conference of the International Labor Organization in Geneva, Switzerland.

The industrialist’s point of view will be presented at 2:00 p.m. by Merritt D. Hill, president of the J. I. Case Company. A resident of Racine, Wisc., Mr. Hill is a former vice-president of the Dearborn Motor Corporation and a former manager of Western Implement Merchandisers. He is a graduate of the University of Detroit.

A successor to the old “Farm and Home Week” comes to campus on March 25 in the form of the Cornell Agricultural Leaders’ Forum. It will be held in the Alice Statler Auditorium from 10 a.m. to 3:30 p.m. and the public is invited.

The purpose of the forum is to probe and ponder questions and problems of interest to the total complex of today’s dynamic agriculture. It also offers a platform for opinions by eminent leaders on the future of agriculture and its allied industries and organizations.

The theme of the forum is “Speaking Out on the Great Issues of Agriculture.” Some of the issues which are likely to come up are federal subsidies for agriculture, government controls, the political strength of farmers, the importance of large corporation farms and family farms, international trade agreements, and competition from the Common Market. The six viewpoints on these issues will be those of the farmer, the politician, the labor leader, the industrialist, the consumer, and the internationalist.

William Bensley, president of the New York Farm Bureau, will discuss the position of the farmer to begin the forum at 10 a.m. Mr. Bensley is a dairy farmer in Springville, N.Y., where he is an outstanding citizen and member of numerous farm organizations.

At 10:30 Howard W. Robison, Congressman from New York’s 33rd District, will present the politician’s viewpoint on the issues of agriculture. Mr. Robison, a graduate of Cornell University, is a resident of Owego, N.Y. He has been active in town and state politics and civic affairs for many years.

William Bensley

Howard W. Robison

Dr. James Mendenhall

John Strohm

Leon B. Schachter

Merritt D. Hill

Following Mr. Hill at 2:30 will be Dr. James Mendenhall, educational director of the Consumers Union of the United States. Dr. Mendenhall works with adult groups, schools, and colleges, assisting them in the development of their own consumer information and education programs.

The final speaker at 3:00 is John Strohm, editor, publisher, author, and foreign correspondent. Mr. Strohm, from Woodstock, Ill., is recognized as one of the foremost agricultural editors in the world. He will present the internationalist’s viewpoint.

A period for questions and general discussion has been set aside at the forum. About 900 farmers and men in agricultural fields are expected to attend.

A 28-and-one-half minute version of the forum, with Bob Earle as moderator, will be filmed and available for New York State television stations.

Professor William Ward, head of Cornell’s department of extension teaching and information, is chairman of the planning committee, which is comprised of C. E. Palm, dean of the College of Agriculture; W. Keith Kennedy, director of the Cornell Experiment Station; and Charles Russell, professor in the extension teaching department.
Freehand and mechanical drawing were included in the College of Agriculture’s first curriculum. The courses were offered for practical reasons; agricultural engineers must be able to present their projects as plans, and natural science students should be equipped to illustrate their work. Today mechanical drawing is taught by the agricultural engineering department and freehand drawing is a division of floriculture. The drawing division grew with the College of Agriculture, and both have broadened their objectives since 1874.

Drawing courses offered today range from purely practical, such as scientific illustration, to purely aesthetic, such as oriental brushwork. Somewhere in the middle and of the most use to most people is freehand drawing, still essential and still popular after 90 years. Yet is drawing really essential? What does art have to do with agriculture? As one student put it, “What do you draw—cows?”

Despite contrary evidence from every quarter, many people still think the College of Agriculture’s sole concern is graduating farmers. Even if that were true, who can say that farmers have no use for art? A farmer is a busy person, but milking the cows or plowing the north forty isn’t his whole life. He may never pick up a paintbrush except to use on the barn, but every day he sees and appreciates countryside or woodlands that artists flock from the cities to sketch.

Most students in the College of Agriculture don’t plan to live on farms, however, and their interest in drawing was demonstrated this spring by 72 pre-registrations for one elementary course. What do students get from such a course? Usually more than they realize. They learn to look at things in new ways, and often learn to be more realistic in evaluating their work and abilities. For example, many students who take an elementary course are just curious to see if they can learn to draw a straight line. Some flatly say, “I can’t.” Surprisingly, the student who can already draw fairly well may be the most frustrating one to work with, report Mrs. Ann Elliot and Jack Lambert, associate professors in the drawing division. Such a student may “interpret assignments in ways he already knows,” says Lambert, “and his work at the end of the term will be the same as it was at the beginning, showing that the 15 weeks were wasted in terms of his growth and experience in the use of his talent.”

“If you have the courage to try new ideas, it’s often amazing how much progress you can make during a term,” adds Mrs. Elliot. Accordingly, beginning students learn to set reasonable goals for themselves. Reaching those goals or surpassing them is an achievement to be proud of. At the end of the term, students feel that they have really done something worthwhile.

The College of Agriculture’s drawing courses are open to all Cornellians (most Fine Arts courses are for majors only) and some are strictly for beginners. Advanced courses are available to interested students, and special projects where the student chooses his own hours and topics are also possible.

While professional skill can certainly be acquired, these courses are not designed solely for those who plan artistic careers. They are designed to help students develop an interest, and perhaps a talent, that may become part of their futures or may remain just experiences that make modern or traditional art easier to understand and appreciate.

Consequently, it is appropriate that these drawing courses be offered by the College of Agriculture, for their goals are the same: to give the individual practical knowledge, and to educate him for community life and the fuller appreciation of his own abilities.

Aesthetic Meets Pragmatic:

Art and Agriculture

EDITOR’S NOTE: The cover picture, the illustrations for this article, and the author’s water color pictures chosen for the current exhibit in Plant Science were the only pieces of art saved when the art department was destroyed in the Mann Library fire February 26, 1964.

by Toni Gailey ’65

Drawing by Agnes Sutherland
Microwave Oven:

"Hotter Heat"

by Rochelle Yedvab '65

Cornell University is the testing ground for many experiments. They are conducted in laboratories or in special experimental stations that are set up. Now even the Dairy Bar is getting into the act.

The Cornell Dairy Bar is currently experimenting with microwave cooking. This is a new technique, and before adopting it as a part of the Dairy Bar's operation, it had to be tested. The Dairy Bar has in its possession two of these ovens. One, the Thermowave Microwave Oven, was donated by the company which manufactures it. The other, called the Radarange, was purchased. These ovens, which cost $1300 to $1500 each, can save considerable time and effort.

Microwave energy is a particular type of high-frequency radio energy. Basically it is no different from the energy that carries radio and television programs from a broadcasting station to a receiver. It differs only in that its frequency of vibration is considerably higher. The energy waves coming from a standard broadcasting station may, for example, vibrate at 550,000 times a second, while the energy in the microwave oven vibrates 2.45 billion times a second. Microwave energy, because of its particular frequency, has a number of distinct characteristics which can be put to good advantage in the kitchen.

One advantage is that the food becomes heated while the oven and utensils remain cool. This happens because unless microwave energy is absorbed, it will not be converted into heat. Whether a substance reflects, transmits, or absorbs microwave energy depends upon its molecular structure. Foods (raw, pre-cooked, refrigerated, or frozen) fortunately absorb the microwave energy and become hot. Air and many glass, china, and paper products transmit the energy, but since there is no absorption, there is no heating. Metal reflects the microwaves, and since there is no absorption, again there is no heating. The net result is the opportunity to cook or heat food in an oven where the utensils remain at room temperature, except for heat they may pick up from the food being heated in them.

Microwaves penetrate deeply into the food, after striking the surface. For that reason, liquids boil quickly and solid foods are heated almost instantly. In conventional cooking only the surface of the food is heated, and this heat is carried to the interior of the food by the slow process of conduction. The only way to speed up the transfer of heat is to increase the surface temperature. Heat will flow faster as the difference between the surface and center temperature is increased. But there is a limit to this approach because an excess temperature will damage the surface of the food and cause impractical shrinkage before the center has been sufficiently heated.

Foods cannot be burned using the microwave technique. They must be pre-cooked to the desired condition and then heated. Since they must be pre-cooked and then placed in the microwave oven, this is an ideal situation for a working wife, who may prepare her food and quickly heat it upon her return from work.

This new technique of microwave cooking has put pressure on the manufacturers of pre-cooked foods such as TV dinners. These men are attempting to create better tasting, and consequently more desirable, food products. They are setting up test kitchens and conducting research to improve the quality of their products. They are also trying to produce a suitable wrapping for the improved "instant" dinners. Currently, most dinners are in aluminum or tin pans, but since a microwave oven needs non-metal utensils, a new material must be found.

Once these difficulties are overcome, a woman will no longer have to pre-cook her own foods, if she is in a hurry. She will be able to buy a variety of appetizing meat, fish, or shellfish dinners, and within a few moments after arriving home, she will put a piping hot, delicious, work-free dinner on her table.

This oven will also revolutionize restaurant cooking. It will eliminate customer waiting time and will help shorten those long waiting lines that appear at restaurants around lunch and dinner time. A patron will make his selection, and in a matter of minutes his order will be before him.
A Nose
for
Flavor
by Donald Semmler '67

Would you like to know the “quality” of flavor in fruits and vegetables before you make a purchase? A method is now being researched in the vegetable crops department at Cornell University that would allow you to compare flavor, as well as size and ripeness, when you buy.

The method, formulated in 1951 by Dr. John D. Hartman, is an electronic olfactometer ("nose") which will measure flavor of fruits and vegetables by an electrochemical analysis of odors of samples of the respective fruit or vegetable.

Before 1951, little was known about odors and their detection and interpretation in the human nose. It was understood, however, that odor played an important role in the formation of flavor. The taste buds in the mouth only determine the difference between sweetness, saltiness, bitterness, and sourness. Any other flavor sensations are the result of odors given off as vapors in the mouth, and detected by odor sensitive hairs in the nose.

A new theory on the structures and operation of the human nose led Dr. Hartman to present this new and different method to measure odors electrochemically.

Progress was slow at first as a result of lack of time to devote to this research and lack of facilities and equipment. Considerable work was done by Dr. Hartman up to 1961 under the handicaps mentioned. In that year, he received a grant from the National Institute of Health and the project gained momentum. But more important, Dr. Hartman was fortunate to gain the aid of an able assistant, Dr. Walter Wilkins, to carry out much of the research that had to be done.

The instrument proposed by Dr. Hartman consists of a microelement over which odors are passed. The microelement is in contact with a porous rod saturated with an electrolyte. Due to the small size of the microelement and the small area of contact with the electrolyte solution, a polarization effect occurs when a small voltage is applied to this circuit. Polarization lowers the current caused by the initial application of voltage and after a short time, the current in the circuit remains at a steady level.

At this steady current level, odors are passed over the microelement in a moisture saturated carrier of pure air. The absorption of the odorant alters the electrical double layer on the microelement, and as a result, alters the current. Since the alteration in current can be measured and since each odor has a different alteration effect, the change in current can be used to determine the odor.

This system presents many variables, all of which must be considered and researched. One is the use of different material in the microelement. Platinum was first used because of its inertness and stability, but others are now being tested. Another variable of the microelement is the contact area, which is determined by the size and shape of the microelement. Other variables are related to the nature and concentration of the electrolyte solution and to the applied voltage, which varies anywhere from zero to plus or minus one and one-half volts.

The initial approach to this research is through the use of pure compounds because there is presently no way to identify compounds from a mixture. Most odors are mixtures of many volatile compounds and the human nose makes no effort to determine individual compounds but determines the over-all effect. The electronic nose may not be able to detect and measure all components of a particular odor to a large enough degree to make use of it as a factor in determining the total flavor quality of some foodstuffs. Since the total flavor sensation cannot always be measured, the problem of relating the “electronic nose” to a human nose is one that still has to be worked out.

Another problem is researching the extreme number of variables. This is mainly the work of Dr. Wilkins. The effort to really prove the “electronic nose,” as it is popularly called around the office, is being held off until more of these variables can be researched and more information is known.

Because these variables have not been completely researched, Dr. Wilkins feels that perhaps the machine has had too much publicity, since many parties believe that progress has been made further than it really has. Even though the machine is still unfinished and has many problems to be ironed out, such as setting up standards by which flavor can be measured, great potential has been recognized in it. In fact, three major instrument manufacturing companies have expressed interest in the “electronic nose.”

Someday the food industry may be dependent on it for quality control of flavor and use it to detect spoilage. It could also be used in detecting toxic gases. Perfume manufacturers may use it to evaluate their products, as could all cosmetic firms, if odor were an important part of their product.

Even though the electronic nose is so “young,” it seems to have a bright future.
Late in the spring, when signs appear advertising Hotel Ezra Cornell, students become very curious about the history of our University’s “hotel for a day.”

The story begins back in the early 1920’s, a period characterized by tremendous technical developments in the hotel field. Hotel leaders were having trouble keeping informed of the new complexities of their business and realized the need for vocational schools in hotel administration to train the executives of the future.

It was during this era that the American Hotel Association launched a program to establish hotel administration programs in four universities in different sections of the United States. One of the schools chosen to receive their $20,000 annual subsidy was Cornell. In 1922, a department of hotel administration was established in the School of Home Economics, then a division of the College of Agriculture.

Professor Howard B. Meek was hired as the department’s first instructor and taught the beginning class of 21 students. Dean Cornelius Betten worked out a hotel curriculum using courses from various colleges in the University. For example, food production and preparation was taught in the College of Agriculture and Home Economics, while accounting, chemistry, economics, physics and English were taught in the College of Arts and Sciences. The department also used the facilities of the engineering and architecture schools. The hotel division saw its first graduating class in 1925, although its membership had been reduced to ten. Cornell was a tough school, even in the 1920’s.

In the early days of the hotel department, as today, there was great emphasis on the practical application of knowledge. Therefore, it has been an annual tradition for the students to organize Hotel Ezra Cornell. On this day, the students perform all the functions of hotel management and prepare a banquet for visiting hotel men from all over the country.

It was for this occasion that Ellsworth M. Statler visited Cornell during the 1920’s. Statler was shown around the campus and seemed only to find room for suggestions and improvements. Having been a “self-made” man, he was a little suspicious of the academic environment. Later that day when Statler began to speak at the banquet, Meek and the other hotel department directors were nervous about what he would say. Much to their surprise, his speech was short and sweet. He said: “Meek can have anything that he wants.”

Soon after this memorable speech, the American Hotel Administration found it impossible to continue its subsidy to Cornell. However, the Statler Foundation, established after E. M. Statler’s death in 1928, came to the rescue with generous grants for the hotel department.

The department prospered and its enrollment grew, and in 1950 it became the School of Hotel Administration. However, it was still affiliated with the state colleges until 1954, when it became an independent academic unit of the University.

The Statler Foundation has continued to play an important part in the development of Cornell’s Hotel School. Its most recent and most generous gift has been the two-and-one-half million dollar Statler Hall, the first college building in the United States constructed specifically for hotel instruction. The amazing feature of Statler Hall is how it integrates its three distinct functions. It is first of all a 36-room hotel, secondly a classroom building, and thirdly a laboratory. This allows the students to practice what they are taught in the “hotel on campus.” For example, accounting students can use the actual records of Statler Inn, and personnel problems arising in the Statler are used for discussion in hotel administration classes.

Since the construction of Statler Hall, a new wing, containing a library and the 900-seat Alice Statler Auditorium, has been donated to Cornell by the Statler Foundation. This $2 million donation brought the total contribution of the Statler Trustees up to well over $6 million.

The College of Hotel Administration and beautiful Statler Hall are a hotelman’s dream come true. In the words of his own wife, both will stand as “a lasting memorial to Mr. Statler.”
The Busy Dean of Students

by Kenneth Goldstein '64

Stanley Davis, Dean of Students.

The dean of students' office, located in Day Hall, is concerned with the 19 or so hours the student spends outside the classroom. Its activities run the gamut from insuring proper living conditions to creating a suitable environment for self growth.

Its basic philosophy is to encourage what Dr. Stanley Davis, dean of students, terms the "authentic" person. Dean Davis believes each student "must create his own value structure" as his first step toward maturity. The authentic person will then pursue his interests and become what he, not society, wants himself to become. Dean Davis pointed out that some of the most outstanding people in history were those who did what they believed in. Similarly, what is important for the student is that his actions be truly reflective of his own personal values.

This attitude, that the student should have an environment conducive to self growth, is reflected in the office's three areas of responsibility. These are student housing, student activities, and counseling.

The dean of students' office concerns itself with the three basic types of housing available to University students: dormitory, fraternity and sorority, and off-campus. In the dormitories the dean's office is responsible for supervision and counseling. It selects, trains and supervises the dorm counselors and head residents. The counselor is available to help freshmen, and to a limited extent, upperclassmen, with any difficulties that may arise.

Since sororities, fraternities, and off-campus living units are not under the direct jurisdiction of the University, the dean's office is primarily concerned with the student's health and safety, and it gives advice whenever assistance is requested. The recent regulations on off-campus housing are the result of this concern for the welfare of the students. The dean's office also helps monitor fraternity and sorority rushing.

The second major responsibility of the dean's office is to act as an advisor to student government and various other student bodies. In this capacity the dean's office advises virtually all major student groups. Student activities are looked upon as an important complement to formal classroom education and as a significant area for the development of interests and commitments of lasting significance. Students, in pursuing their interests, are encouraged to plan their own activities. The dean's function is primarily to help these student groups relate to the University community and its goals. The dean's office also plans and executes programs designed to stimulate and inform students about crucial problems of our day. The seminar on the Second American Revolution, dealing with the integration crisis, is an example of such a program.

A third major area of responsibility is student counseling. The dean's office realizes there are many factors that influence the student's academic performance. Some of these are strictly academic, such as choice of courses, and can be handled by the student's faculty advisor. Others are more personal, such as family difficulties and trouble with roommates, and often the student does not wish to discuss these matters with his academic advisor. To deal with these problems the dean's office has trained personnel who are always available to talk with students about their difficulties. The dean's office may refer the student to other more appropriate agencies, such as CURW or financial aids, which may be able to provide the assistance needed, or the office may handle the case itself.

The basic purpose of this counseling is "to protect but not shelter" the student in his transition to the adult world. Dean Davis feels that his office should, in times of personal crisis, provide "an adult, mature shoulder to rely on," but that counseling should encourage the student to make his own decisions. It is not intended to remedy deep emotional problems— it is what is termed "operational counseling." Its function is to help the student work through his immediate problems, so that they will not hinder his academic achievement. Since this counseling has proved valuable to many students, Dean Davis plans to expand it. Next year there will be a separate dean in charge of counseling.

Through these many functions, the dean of students' office plays a valuable role in making the student's four years at Cornell a meaningful and satisfying learning experience.
If a high school junior scores in the top 99th percentile on his Preliminary Scholastic Aptitude Test (PSAT), he may be eligible for a unique summer program offered by Telluride Association, an educational trust with headquarters on this campus.

Two such programs are offered at Cornell. Credit is not given for the six week study period, and the subject-matter is not intended as a substitute for course work. One program to be held this summer will explore selected aspects of Greek civilization. The other will be concerned with appreciation of novels, poems, and plays. The Shakespearean play will be emphasized. A summer program will also be offered at Princeton. Its topic for 1964 will be concerned with the American Bill of Rights, and unlike the Cornell programs it is open to men only. All programs will be under the direction of faculty members.

The summer project, however, is only one activity of Telluride Association. Its major concern is the operation of the Cornell Branch located in a yellow brick house below Willard Straight Hall. It was built in 1910 by the Association's founder, Lucien Nunn, and has since been the residence of intellectually gifted undergraduate and graduate students chosen by the Association.

Mr. Nunn, a pioneer in the high voltage transmission of alternating current, founded the Association at Cornell. Because of his profession, Mr. Nunn realized the need for qualified electrical engineers. In 1911 a constitution was drafted and approved providing for a new self-governing educational organization to be endowed by Mr. Nunn. Telluride Association is self-perpetuating and has no ties with a specific school or department of the university. It conducts its business at an annual convention usually held in Ithaca. The 1963 meeting established a new branch at the Berkeley campus of the University of California.

Telluride Association provides a suitable environment for the highly gifted and motivated. At its Cornell Branch students selected as guests of Telluride live at the house (or, in the case of young women, eat there) without cost. If other educational expenses cause difficulty, application for financial aid may be made to the Association. The few select students, who attend Cornell University, are chosen on the basis of superior ability, idealism, and potential for leadership. Candidates are considered from the summer program, from the student body on this or other campuses, and from recommended freshmen applicants. Practical work experience is a constitutional requirement of the association because of its value in developing a capacity for responsible action. During the academic year there are about thirty students participating in the program.

Telluride House is spacious and has a fine library and a high-fidelity sound system with an excellent collection of classical records. At the house, play-readings, chamber music concerts, recitals, and informal talks are held. The university community attends many of these events. On the social calendar are exchange dinners, informal parties, dances, and house parties. Many distinguished visitors to Cornell are guests of the House. Telluride students also participate regularly in a wide variety of campus activities.

Balance and variety exist among the undergraduate and graduate students from the United States and foreign countries who live at Telluride House. At least two faculty members, including Madam Frances Perkins, Secretary of Labor in the Roosevelt administration, also live there. Among the distinguished visitors to the house in recent years have been all but one of the living members of Mr. Roosevelt's cabinet. The remaining one, Postmaster-General Farley, is scheduled to give a weekend seminar at Telluride in April.

Alumni of Telluride who graduated from the Cornell College of Agriculture have made significant contributions both here and abroad. Among these are John Niederhauser, in Mexico with the Rockefeller Foundation; John Mellor, spending this year in India on a Rockefeller grant; Robert Bull, involved with major research in the food distribution industry; and James Dean, a 1963 graduate now in Ecuador with the Peace Corps. While no systematic study has been done on the accomplishments creditable to the vision of Telluride's founder, both the university and the participating students have benefited from the presence of the Association.
Graduate School:
What Does It Take?
by Conan Mooney '66

From the time he finishes his sophomore year until he receives his B.S. or B.A. degree, the average undergraduate asks the question, "What shall I do? Should I get a job after graduation, or should I go on and get an advanced degree?" What are some of the factors a student must consider in reaching his decision?

The average undergraduate degree-holder who elects to take a job with industry can expect to receive a starting salary of about $5500 a year. Usually he will go through a three to six month training program. After that, he will take his place in the spot for which the company had originally selected him. He may work his way up through the ranks, but there is a chance he may never leave his original position. It is often cheaper for the company executives to go out and hire an advanced degree-holder than it is for them to send one of their employees through a long and expensive training program.

The outlook is much better for the student who chooses to get his Ph.D. before accepting a job in industry. His starting salary will be $8500 a year, or more. Also, he will immediately assume a position of responsibility within the company. His future, for all practical purposes, will be assured. The main barrier to his advancement will be his own inability to produce results.

Obviously, it behooves every student to get an advanced degree, but can he do it, and even more important, should he do it?

In an interview, Dr. Damon Boynton, dean of the Graduate School at Cornell, suggested that the prospective graduate student ask himself the following questions: "What do I do with my mind when I'm not fulfilling the quantitative requirements for a degree? Do I read a lot? Do I work at trying to broaden my interests? Do I get out and do things, or do I just sit around and talk about doing them?"

"Graduate students," said Dean Boynton, "are pretty much self-selected. They are people who have depth." He pointed out that although grades are important to the admissions committee, other things, such as a letter of recommendation from the student's faculty advisor, are often more important.

"Solid B work over the last two years," he said, "is a good indication to the committee that the student is mature enough to go on. But if the student is not motivated by a true and genuine interest in the field he intends to study, then he should not go into graduate work," he added.

Over the past few years, the number of students who have entered graduate school has risen sharply. From 1931 to 1940, about 15 per cent of the graduating class in the College of Agriculture went on to graduate work. By 1955 that number was up to 27 per cent, and last year it reached an all-time high of 43 per cent. Although most of those entering graduate work entered fields directly related to agriculture, not all of them did so. Examples of chosen fields not directly related to agriculture are medicine, law, theology, and business and public administration.

According to Professor Howard S. Tyler, head of Vocational Guidance and Placement for the College of Agriculture, one reason for the large increase in the number of students entering graduate school is the change in recruitment practices of the country's colleges and universities. Previously it was up to the student, with the aid of his advisor, to find a school that would grant him admission. Now the colleges and universities are seeking out the students. One method, used by the College of Agriculture at Cornell, is to prepare a list of the names and addresses of the top students in the college, usually the upper 25 per cent. They send that list out to other universities in exchange for similar lists of names. Cornell swaps lists with all other land grant colleges in the country. When the trading is complete, the schools send the student packets of material, which expound the advantages of their graduate programs. If the student has not considered graduate school before, he probably will when he receives this literature.

To be awarded a Ph.D. degree in the biological and social sciences usually requires from three to five years of hard work with long hours and short pay. It is not an easy task, nor one that everyone should undertake, but those who do receive advanced degrees have made a wise investment in their future.
COUNTRYMAN
CAPSULES

The Guldin Award Committee has reviewed the fall term issues of the Cornell Countryman. The following awards were made:


Peter Heilemann '66, won the second place prize of $50 for his article, "The Evolution of a Mechanical Brain," which also appeared in the January 1964 issue.


Four received honorable mentions for their articles of general excellence. They were: Susan Isler '65, for "What Will They Think of Next—The Cornell Egg Roll?"; Robert Fistick '65, for "Ithaca Weather—Topic for Study and Complaint"); Michael Whittier '65, for "Advance Against Apathy"; and Ken Balmas '65, for "Fragment from the Caves of Qumran."

Associate Prof. Mary B. Wood left Cornell University February 4 on a four month assignment to study the need for home economics education at the University of Liberia. Miss Wood is the assistant to the dean of the New York State College of Home Economics at Cornell. This appointment is part of Cornell's Agency for International Development program. Its purpose is to assist in the development of the University of Liberia.

When Miss Wood returns to Cornell, she will assume full time responsibilities related to international home economics programs.

Improvement in the efficiency of protein use in animals is being researched at the N.Y. State College of Agriculture at Cornell.

The U.S. Public Health Service has granted more than $28,000 to Prof. Duane A. Benton, a nutritionist in the animal husbandry department, to conduct basic research with rats to find out how changes in amino acid balances affect animals. This research is important because amino acids are involved in the manufacture of proteins, which affect an animal's metabolism.

The eventual aim of this work is to find the most efficient way to meet the protein requirements of people. Professor Benton says the basic problem involved is that many people in the world don't get the protein they need, making efficient use of available protein important.

Dr. Franklin A. Long, vice president for Research and Advanced Studies at Cornell University, recently visited the Geneva Agricultural Experimental Station where he spent most of his time looking at the Station's Food Research Laboratory. He was particularly interested in the chemistry research programs of the Station, since he was chairman of Cornell's chemistry department from 1950 to 1960. Dr. Long was a member of the Cornell faculty from 1937 to 1960.

Both Presidents Eisenhower and Kennedy used him as a consultant to many science advisory committees. Because he is an outstanding expert in the field of detecting underground nuclear tests, Dr. Long was appointed scientific advisor to the Averell Harriman committee that went to Moscow and negotiated the Nuclear Test Ban Treaty with Russia.

Cornell alumnus, Alfred N. Schwartz, who is presently editor of The Poultryman, and advertising manager George M. Curio recently purchased the controlling interest in that publication from its former publisher, Mrs. H. J. Souder.

During the past 30 years The Poultryman has developed from a small regional weekly to one of the largest and most respected publications in the field. It now has complete national coverage and several regional editions. The new owners intend to intensify this program and expand coverage of foreign news.

Mr. Schwartz received his B.S. degree from Cornell in 1949.

The U.S. Department of Agriculture and the Administration are presently looking into beef imports as an important factor in current beef prices.

To improve the price situation, negotiations are under way with our chief suppliers to set limitations on exports to the United States. Presently, nations have access rights to other nations' markets under the General Agreement on Tariffs and Trade (GATT), and the question is how much access there should be.

Negotiations now underway are concerned with the share of access countries should have in the markets of other countries. Allowances are made for growth in population, rising per capita consumption of beef, and the quality of the product.

The reason for the present flooding of the U.S. market is that the United States is the only major beef market without quantitative restrictions and having a nominal fixed import duty.
WILLARD F. SMITH, '48, Nassau County, N.Y., has been in the real estate and insurance business since graduation. He is presently owner of the Robert L. Smith & Son Real Estate and Insurance business. He is an active member of the Cornell Club of Long Island, the Lions Club, and the National Association of Insurance Agents.

THE REV. WILL PORTER, '49, 3 Grove Street, New Paltz, N.Y., received his bachelor of divinity degree from Drew University School of Theology and is pastor of the New Paltz Methodist Parish. He is also a member of the New York Annual Conference Board of Education and Higher Education Committee.

FRANK OSTERHOUDT, '50, Stoughton, Wis., is working toward a Ph.D. in agricultural economics at the University of Wisconsin. He received his masters degree in agricultural economics in September, 1963.

LAFAYETTE W. KNAPP JR., '51, 815 North Linn St., Iowa City, Iowa, is currently serving as assistant professor and agricultural safety engineer at the State University of Iowa. Previously, he was the District Agricultural Engineer and an assistant professor and extension agricultural engineer here at Cornell's College of Agriculture. He has written many agricultural articles and bulletins.

LUIS MONTERO-PINILLOS, '52, Hacienda Cancato Alto, Pisco, Peru, owns and operates his own plantation. He is currently executive of the Corporation of Ica and has previously worked as Treasurer of the Census in Ica, and for various other associations. In 1962 he ran for senator and placed highly.

DR. ARA A. SHEPERDIGAN, '53, 9841 Hamburg Road, Brighton, Mich., obtained his medical degree at Syracuse University College of Medicine after graduating from Cornell. He is working in the Department of Clinical Investigation of Parke, Davis and Co. He is a member of the Michigan State Medical Society and of the American Medical Society.

STANLEY R. WILKINSON, '54, 110 Houserville Road, State College, Pa., received his masters degree and doctorate at Purdue University. He is a soil scientist at the U.S. Regional Pasture Research Laboratory, University Park, Pa.

RICHARD D. McMATHON, '55, 19 Chatham Street, Nassau, N.Y., is currently a territory representative for Swift and Co. Previously he was a life insurance agent, a professional services representative for Gerber Baby Foods, Inc., and sold farm produce. He writes that he is affiliated with the Nassau Volunteer Fire Dept., and Life Underwriters Association of N.Y.

JUDITH STRONG SULLIVAN, '56, Summer Avenue, Yonkers, N.Y., is a social worker with the Department of Child Welfare of Westchester County. Previously, she worked for the Public Welfare Department in Indiana.

EDWIN L. BOARDMAN, '57, 263 West Granby Road, West Granby, Conn., is a life insurance underwriter for the Travelers Insurance Co. Previously a pilot for the U.S. Army, he is active in the Conn. Army National Guard, National Association of Life Underwriters, and the Granby Community Fund.

LAURENCE PRINGLE, '58, 11 Serpentine Road, Tenafly, N.J., received his M.S. degree in conservation at the University of Massachusetts in 1960. Since then, he has taught a year of science at Lima High School and has taken graduate courses in forestry and journalism at Syracuse University. Presently he is associate editor of Nature and Science, a new children's science magazine.

GERALD P. HIRSCH, '59, 803 Lackland St., Goldsboro, N.C., attended the University of Pennsylvania School of Dentistry from 1959-1963. He is presently a captain in the Dental Corps of the U.S. Air Force. Recently he has won a first place award in a scientific essay competition contest.

FRANK R. CRITELLI JR., '60, Box 181 Lower Road., New Hampton, N.Y., continued studies for one year and worked for the agricultural economics department. Since 1962 he has been in Europe with the U.S. Army. He has visited Italy, Austria, France, Spain, Portugal, Sweden, Denmark, Holland, and Norway while in the army.

MARTHA MERCERS, '61, 8063 Elgin St., Detroit 34, Mich., worked as a medical social worker at Henry Ford Hospital in Detroit. She is presently doing graduate studies in social work and plans to complete work on her masters degree in June 1964.

ELIZABETH POMADA, '62, 200 East 84th Street, Apt. 9B, New York 28, N.Y., was an editorial assistant for the Institute for Radio Engineers (now IEEE). She is presently the publications assistant of the National Aeronautics and Space Administration Institute for Space Studies. She is a member of the publicity committee of the Cornell Women's Club of New York.

JOHN LOSISING BUCK, '14, of Pleasant Valley, N.Y., received his B.S., M.S., and Ph.D. from Cornell University. As an agricultural economist he has written many books on the Chinese agricultural economy and has participated in many committees. He has won many honors for his help and advice to the Chinese, and his book Land Utilisation in China won an award in 1942 for being the best book published in China from 1937 to that time. Although now retired from his former active life, he is doing research on his own, comparing communist China food production with pre-communist periods.
How a GLF mow conveyor system can save you time and money

How to tailor an automatic conveyor system to your specific needs

this “man in the mow” works for just pennies a day!

Yes, it costs just pennies a day for the power needed to operate the GLF Mow Conveying System... only one quarter cent per ton. And this automated “man in the mow” lets you bale hay as fast as you can and put it in the mow on the same day.

A case in point. Mr. Frank Bliss of Houghton, N.Y. doesn’t worry about the time-consuming hard work it used to take to get the hay in the mow. He pushes a button and lets the GLF Mow Conveying System do the job for him. No extra hands needed, either. His son and hired man stay in the field baling. A GLF Mow Conveying System can do the same job for you. And you can tailor the system to your own farm needs.

The GLF Mow Conveying System has removable motor mounts so that the motor can be positioned at any point in the line. It provides 90° delivery for “T” or “L” systems. Equally important, the GLF Mow Conveyor System is composed of identical sections. Add or subtract as many as you need... now and in the future.

Example: Mr. Paul R. Stedman has a conveyor running through his old 66‘ barn. He built a 70‘ extension to the barn, added identical sections to his conveyor and now has a 130‘ GLF Mow Conveying System fed by a 46‘ elevator. With it his 14-year old son gets the bales off the wagon faster than Mr. Stedman can bale it.

Call today for a frank discussion of your problems and requirements. Your GLF has the ability to design... deliver... and keep on delivering whatever your needs may be. Cooperative GLF Exchange, Inc., Ithaca, N.Y.

GLF MOW CONVEYOR

Key features

- Flexibility—identical sections fit your custom-designed installation
- Removable motor mount
- 0°-60° hinge joints prevent elevation between any two sections
- Carriages for 25‘-49‘ elevators
- Rope controlled, movable bale diverter
- Bale guides on each section
- Easy-to-install hangers
- 90° transfer for “T” or “L” systems
- Sealed bearings
- Designed, installed, serviced by GLF farm automation specialists

DAIRY AUTOMATION SERVICE
CORNELL COUNTRYMAN

Vol. LXI April, 1964 No. 7

IN THIS ISSUE

Editorials .......................................................... 1
The Scenes Around Us ........................................... 2
ROTC Flying High ................................................ 4
Lend Me Your Ears ............................................... 5
Expansion .......................................................... 6
Cornell Research Promotes Sugar Industry .................. 8
Guitar, Banjo, and Song .......................................... 9
They Put You in Your Place ...................................... 10
Countryman Capsules ........................................... 12
Alumni ............................................................. 13

Staff

Editor-in-chief ...................................................... Wade Nye ’65
Managing Editors ................................................. Susan Isler ’65 and Peter Monnier ’65
Circulation Manager .............................................. Owen Wavrinek ’65
Librarian ............................................................ Renate Rabeler ’65

Freshmen: Marjorie Case, Donald G. Semmler.
Juniors: Kenneth S. Balmas, Frank Fee, Toni Gailey, Kenneth Goldstein, John Paul Lowens, and Rochelle Yedvab.
Senior: Jay Brodell.

Cover: Oriental Brushwork by Miss Toni Gailey.

The Cornell Countryman is published monthly from October through May by the New York State College of Agriculture, 490 Roberts Hall, Cornell University, Ithaca, New York. Second-class postage paid at Ithaca, New York. Printing by Norton Printing Co. of Ithaca. Subscription rate is $1.75 a year or two years for $3.50; single copies, 25 cents. A member of Agriculture College Magazines Associated. Represented for national advertising by Littell-Murray-Barnhill, Inc., 369 Lexington Avenue, New York 1, N.Y.
EDITORIALS

About Face

“So you’re in Agriculture . . . what are you going to be, a farmer?” This kind of stereotyping reflects a gross lack of understanding that many elements at Cornell have toward College of Agriculture students. It is still not understood that the “Ag School” at Cornell is not only widely recognized as an outstanding institution in its field, but covers a wide range of areas that have little to do with actual farming.

It would surprise many to learn this, but in international circles Cornell University means the College of Agriculture. This is due in part, to the great emphasis given to world agriculture by the College. It is also due to the great significance given agriculture by the majority of the world’s nations, since they are not producing enough food to raise their standard of living. Economists generally agree that a nation’s modernization is only as strong as its ability to produce enough food. For this reason many prospective students abroad put first things first, and enroll in an institution where they can learn agricultural skills and methods. The great number of international students that apply to Cornell bears out its reputation abroad.

In our own country, where no one goes hungry very long, we often forget the importance of agriculture, so that its derision falls into the category of ignorance. The man on the land is vital to the functioning of our economy—without him we would be too busy getting enough to eat to worry about attending classes or putting out magazines. But now the farmer’s role has been greatly changed. He depends on countless specialists in other fields to support his activities.

This interdependence is seen in such places as the United States Air Force. The actual number of personnel who fly our planes is only 6 percent of the entire service. The remainder work as technicians, administrators, tower controllers, and a host of others to keep the fliers in the air. In the same respect the American Farmer needs scientists, journalists, lab-technicians, market experts, and many others to enable him to be the top-producing farmer in the world. In addition he needs doctors, lawyers, teachers, and ministers. These fields and many more are all represented in the ranks of the College of Agriculture alumni. Some do go into farming, which we are all thankful for, but many others go into related fields.

At Cornell it is common to brand “aggies” as farmers, “artsies” as off-beats, and “engineers” as slide rules, but this pigeon-holing of types greatly misrepresents the actual diversification of personality that exists on all campuses of this great university.

Cincinnatus

Co-op Merger

New answers to old questions are as popular with most people as free money.

It was with few dissentions, therefore, that members of the Grange League Federation and the Eastern States’ Farmers’ Exchange recently approved a merger of the two groups as a means of supplying some new answers to their mutual problems and more money as well.

Agway, Inc., the new combine’s name, symbolizes modern agriculture’s changing face. Modern farming is big business, and the related aspects of modern farming are rapidly changing face to keep up.

Mr. E. H. Fallon, GLF general manager, has noted that the merger is combining two strong farm organizations. One of the greater advantages of the merger of these two strong units would seem the increased bargaining power for the farmer and greater marketing ability for farm products. A GLF statement notes that, “The territory served by both cooperatives includes 35 percent of the total population of the United States.” This gives a united marketing program a decided advantage over smaller marketing facilities and gives farmers a greater say in farm pricing.

Research is expected to be another big area where members of Agway will benefit. Obviously, the increased communication and over-all control of research programs now being conducted will be beneficial to the producer. Cooperative research should eliminate any unnecessary duplication that might now exist. The exchange of ideas should result in increased success in the development of new products and the improvement of present products and practices.

Agway covers a natural geographic area. The problems of the GLF membership are much the same as those of the Eastern States organization. And this supplies the answer to a question that many people may have asked, “Which group is going to benefit more from the merger?”

The answer is hopefully, “Neither!” The two big organizations have, in the past, been faced with similar problems because their members are engaged in similar forms of agriculture. Benefits to one, therefore, should be benefits to the other.

The direction of these strides and the fulfillment of Agway’s potential, however, do not depend on the leadership alone. It is up to the members to take an active part in developing Agway’s potential. Able leadership is important, but a large and active membership is essential for progress.

F.F.
High above Cayuga’s waters the busy Cornell campus once again finds itself in the gentle, beckoning hands of spring. A favorite season everywhere, spring comes flitting into Ithaca, snapping at Cornellians’ heels, telling them to get-up and go! The young, adventurous spirit carries us to the exotic beauty and enchantment of far off lands. But no need to dream! Right here in our own Ithaca region we are blessed with some of the most exciting terrain in the world.

As students, we are very fortunate to be spending part of our lives in such a scenic area. But I fear many of us fail to realize what the Finger Lakes Region has to offer in the way of outdoor facilities, and we seldom take advantage of the state parks right under our noses.

What are some of the facilities that the New York State Parks in the Finger Lakes Region maintain? Where are these parks located? And what do they offer us?

Four spectacular parks are located within a thirty mile radius of Ithaca. These parks, Taughannock Falls Park, Robert H. Treman Park, Buttermilk Falls Park, and Watkins Glen Park are less than a 40 minute drive from Cornell.

Nearest to Ithaca, in fact only two miles outside the city limits is Buttermilk Falls State Park. The park gets its name from the foamy, white water which cascades down gentle rock shelves, forming ten waterfalls and a number of slides and rapids. There are two glens in the park and forty foot “Pinnacle Rock” which rises out of the stream. An excellent hiking trail goes up on either side of the gorge for one mile, and from lookout points at the top are fine views of Cornell University, Ithaca, Cayuga Lake, and the Newfield Valley.

The area has plenty of picnic facilities; a box lunch and a short bicycle trip can be combined for a wonderful Saturday or Sunday of hiking and exploring.

Two swimming pools, one at the main entrance and one at the upper area, provide bathing facilities for those students who wish to brave the cool May water.

The park provides both one-room cabins ($6.00 per day), and tent sites ($1.50 per day). This might be of interest to those students who are ardent campers and would like to spend a night off campus “under the stars.”

Buttermilk Falls State Park opens May first and
closes October fifteenth, as do all New York State Parks.

The second area right on Ithaca's doorstep is Robert H. Treman State Park. It is located on Route 13, five miles south of Ithaca.

Once Enfield Glen State Park, the area had its name changed to Treman Park in 1937 in honor of Mr. and Mrs. Robert H. Treman who gave the original 386 acres of land.

The Glen now covers 989 acres, with twelve waterfalls wearing down the soft shale of the gorge. Lucifer Falls, the largest, is 115 feet high.

Three miles of easy hiking trails wind their way through the Glen. At one point the trail “descends a stone stairway” into “Devil's Kitchen” where the swirling waters have carved out stone caldrons. Clinging to the steep canyon walls is one of the most beautiful evergreen forests in the Finger Lakes Region. Hemlocks, cedars and pines decorate the glen with their green splendor.

A century old mill near the upper entrance of the park has been converted into a museum and offers a glimpse at the past to interested historians.

Plenty of picnic tables and outdoor fireplaces are available, and cabins ($10.00 per day) and tent sites ($1.50 per day) accommodate those interested in camping.

A pool is located at the lower end of the park, but for those interested in getting a suntan there is a wonderful, warm “sunlawn” beside the pool.

This would also make an excellent bike trip for the Cornell student; it could easily be combined with a bike ride to Buttermilk Falls for a day of cycling, hiking, swimming and exploring.

With warm May weekends on the way, many individual students, fraternities, sororities, and clubs will be heading up the west side of Cayuga Lake to popular Taughannock Falls State Park. Taughannock comes from the Indian word “Taghkanic” and means “The Great Falls in the Woods.” These spectacular falls drop 215 feet into a gorge 400 feet high, and are 50 feet higher than Niagara.

A paved road takes visitors to a vantage point high above the falls, but a more exciting view comes from hiking up the one mile trail through the gorge to the base of the thundering falls. A deep pool has formed here but “no swimming is allowed” due to the strong undertow created by the roaring waters.

Where the creek runs into Cayuga Lake a large flat delta has formed. This flat area makes an excellent athletic fields for football, softball and other activities.

Along the mile of lake front created by the delta one finds a beach, a launching area with docks for small boats, and plenty of stone fireplaces and picnic tables. For those who prefer all the comforts of home there are bathhouses with hot and cold showers and a concession stand.

As far as convenience and facilities are concerned, this is quite probably the best spot for parties and picnics in the Ithaca area, and it offers unlimited opportunities to clubs, fraternities, and sororities for spring outings.

Thirty miles from Ithaca at the southern tip of Seneca Lake lies Watkins Glen State Park. The nineteen waterfalls and the deep gorge are accessible via excellent footpaths which run through the gorges and along the wooded rim. Visitors may walk over, beneath, and through the mist of these lovely, towering falls.

Above the glen are two dams which form White Hollow and Punch Bowl Lakes. White Hollow Lake has filled in with gravel, and there is no swimming in Punch Bowl Lake. Just this summer the New York State Park Commission will open a new Olympic swimming pool which will be used by the public.

There are no cabins here, but there are picnic areas and tent sites, and for students with some camping equipment this can make a wonderful weekend excursion. Some students have discovered these facilities when attending the sport car races at the Glen.

The State Parks have much to offer the student looking for some spectacular scenery and adventure. Best of all they are close at hand. A day trip to any of those mentioned can be a thrilling and very worthwhile experience. But one trip will never suffice and the student may find himself rediscovering these awesome creations of nature time and time again.
A private pilot's license might not appear to be a by-product of a college career, but some seniors will receive their private license this spring as a result of R. O. T. C. Flight Instruction Programs. Upon graduation these seniors will be commissioned as reserve officers in one of the three services and will be stationed at flight schools throughout the country.

All three R. O. T. C. units at Cornell have this program, where selected seniors who have volunteered for flight training are given lessons while they are still students. The actual purpose of these lessons is not to turn out full fledged pilots, but to determine if an R. O. T. C. cadet is capable of learning the fundamentals of flight.

Each cadet who volunteers must undergo an extensive physical examination and must meet strict requirements higher than those necessary for commissioning. Then the cadet is allowed up to $36\frac{1}{2}$ hours of flight time throughout his senior year. This time is just above the minimum the Civil Aeronautics Board requires for a person to apply for an examination. According to statistics, very few pilots are able to pass the exam with as few as 36 hours. However, more than half of the Cornell students in this program do pass each year, indicating the calibre of instruction and the calibre of the students.

Although the programs of the three services are basically the same, there are some differences. The Army R.O.T.C. cadets train in Piper Cubs at Ithaca Municipal Airport; The Air Force Cadets fly Piper Tripacers, a heavier aircraft, at Tompkins County Airport; and the Navy, also flying at Tompkins County, uses Piper Cubs for the first part of the training and then switches to Tripacers after about 20 hours of training.

All the services utilize the existing facilities around Ithaca and contract the training of the cadets to civilian instructors. This enables the students to have instructors available—weather and time permitting.

Weather and time are the two biggest problems that Cornell students have with the flight program. During Ithaca's notorious winter months, instruction grinds to a halt, forcing the student to plan his studies ahead of time so he's ready on a clear day. Since time is the most important commodity for all Cornellians, it is also for the fledgling pilot. Thirty-six hours doesn't seem like much, but when it is judged in terms of brief 15 minute intervals, squeezed between fog and snow-storms two or three times a week, it seems a great deal.

However, in spite of these drawbacks, each clear day in Ithaca will see almost all of the students in the program struggling for an appointment with their instructor.

Aside from the actual flying, each cadet participates in classroom instruction in weather, navigation, civil air regulations, and good flying practices. Upon completion of this non-credit course, which varies according to the service, the cadet is more able to pass the required written examination necessary for a license. It is also an observed fact that vital information can be learned more readily in the classroom than if it were picked up at random through trial and error. This is another reason why Cornell R. O. T. C. cadets are able to master the art and science of flying more quickly than the average civilian student pilot.

R. O. T. C. cadets in the program look at the chance to fly as a welcome break from academics. However, they soon will step into a training program that is much rougher than Cornell's. After graduation and commissioning, they will be sent to various flight schools where they will be subject to strict discipline, tough classroom schedules, and extremely heavy pressure.

Although the pressure is great, after these Cornellians complete flight training, which lasts about 14 months, they will join an elite group: flying officers in the armed services.
Public Speaking on the Upper Campus

Lend me your Ears

by Susan Isler '65

Eastman Stage

The Eastman Stage for Public Speaking, in its 54th year, under the direction of the Department of Extension Teaching, has always been a contest where students present interesting discussions of current topics either in the field of agriculture or public problems. Open to any student in the College of Agriculture, over 1500 students have participated since its beginning in 1910.

The students prepare topics of interest to them for each round of elimination. The second round is entered by twelve semi-finalists, of which six are chosen for the final round. Three weeks before the final competition the finalists must submit their final draft of the speech to a speech advisor in the ET department. From that time until the contest, there is a period of intensive rehearsal; each contestant spends many hours in practice sessions with his speech advisor.

The finals for the Eastman Stage are held each year late in March. The judges are usually agricultural leaders, and often they have been previous participants in the contest. The judges use only two criteria in selecting the winner: what he has to say and how he says it.

The contest was originated by Mr. Almor R. Eastman. Mr. Eastman, who was a trustee of the University, wanted to help the College of Agriculture develop leaders. He wanted the students to realize the importance of being able to intelligently express themselves in affairs of agriculture, the nation, and the world. The result of this concern was the Eastman Stage for Public Speaking. Between 1910 and 1918 Mr. Eastman contributed $100 each year to the contest, which was divided between the two top contestants. After 1918, he established an endowment fund which makes the annual prizes available. Today the top finalist receives $100, the runner-up receives $25.

The final competition this year will be held April 23 at Warren Auditorium, 8:00 P.M.

Rice Stage

The College of Home Economics has reinstituted a tradition that has been missing since 1956. The Elsie VanBuren Public Speech Stage was held again this year as a result of renewed interest in public speaking.

The public speech stage was endowed by the late James E. Rice, professor of poultry husbandry, in 1944. It had previously been supported by an anonymous donor, who, it was revealed, had been Professor Rice. Through this speech contest, he wished to encourage the Home Economics student's interest and ability to participate in public affairs. Dwindling interest and the need for procedural changes had caused its discontinuation in 1956. The endowment fund, however, continued to grow by earning interest. This year a total of $275 was awarded to the finalists.

The Rice Stage is open to any Home Economics student in good standing. For the preliminary competition, the contestants give five minute impromptu speeches on topics of general interest about Cornell. The students draw their topics just before speaking. Three faculty members choose the finalists. Each of the finalists is then assigned a speech advisor before the final competition.

The final speeches are judged by a panel consisting of three faculty members, three students, and a member of the Rice family. Each of the finalists delivers an eight minute speech on a topic she chooses. Selection is based on the handling of the subject, the manner of organization, the manner of presentation, and the total impact of the speech. The finalists are then ranked from one to five. The top finalist receives $100. The second prize is $75, third prize is $50, and fourth and fifth prizes are $25 each. In addition, the first prize winner will deliver her speech as a part of the College of Home Economics Honors Day Program on April 11, 1964.

See Countryman Capsules for this year's winners.
When current building plans are completed, the Cornell campus will have undergone close to a $25 million transformation.

A visit to the Office of Planning in Day Hall reveals the great deal of activity going on in regard to University expansion and development. There are always many small remodeling jobs occurring that go virtually unnoticed, but full-scale construction projects draw a great deal of attention.

**Physical Sciences**

Students who had to pass from upper to lower campus last year, will remember the blockade created when Rockefeller's rear wing was being torn down. This wrecking was to make room for the construction of the Physical Science Building which is now nearing completion. This structure, located off the northeast corner of Rockefeller Hall and the southeast corner of Baker Lab, will be primarily used for research in the physical sciences.

According to John B. Rogers, manager of operations at the Atomic and Solid State Physics Laboratory, the new Physical Science Building's most modern advantage is its flexibility of use. The new building's design allows access to laboratories from separate utility corridors, in addition to normal traffic in regular corridors. These utility corridors permit moving and alteration of special facilities as laboratory use changes with time.

Other features of the building include undergraduate astronomy labs, and added office space. A special addition is the large science library which will be jointly shared by all the physical science departments.

**Home Economics**

An expected 40 per-cent increase in the enrollment of the College of Home Economics by 1970 has prompted plans for the expansion

---

*Drawing of the new Physical Science Building, which is presently under construction.*

*Model of Freshmen Dormitory Center. Construction will begin summer of 1964.*

*University Planning Includes Six New Buildings*

by
Peter Heilemann '66
and
Owen Wavrinek '65
and renovation of Martha Van Rensselaer Hall. Tentatively a new four-floor wing will be built behind the building parking lot. It will contain laboratories, classrooms, offices, and lounges. Over $2 million in state funds have been reserved for its construction, which should be started by the spring of 1965.

**Chemistry**

An addition to Baker Laboratory is now on the drawing board. Its prime function will be to accommodate the great deal of research carried on by the chemistry department. Its proposed 90,000 square feet will be located at the northeast corner of Baker Lab, overlooking Beebe Lake. Construction will begin around January, 1965.

**Freshman Center**

To relieve the stress of freshman dining and recreation at Willard Straight Hall and Baker Cafeteria, a Freshman Dormitory Center will be erected in the men's residence area. Excavation for the center will begin in the spring of 1965; completion is scheduled for the spring of 1966. The location of the building will be between University Halls 3 and 4, and will be four stories high. Beside a dining hall and study space the four story building will contain music, game, and weight-lifting rooms.

**Agriculture**

It is expected that construction of a new Agronomy Building will begin sometime in 1965. Preliminary plans propose that it will be in the form of an 8 to 10 story research tower flanked by a 3 to 4 story wing. This $6 million project will be located off Tower Road and will extend from the greenhouses east of Plant Science to the west end of Fernow Hall. A corridor will join the wing to Fernow Hall, allowing continuity between the two buildings.

The research tower will concentrate different departments on their respective floors, with necessary experimental facilities and related office space provided for professors and their assistants.

It is planned that this tower-skyscraper will house work in meteorology, soils, field crops, plant breeding and conservation, from the roof in that order. Two high speed elevators will serve both the tower and the wing addition.

The meteorology unit hopes to have a pent-house observatory on the roof. This will primarily be used as a teaching laboratory to allow students to get realistic training in meteorological observation. In addition the Office of the State Climatologist, now in Plant Science, will be moved to this area.

The agronomy department has announced that their new laboratories in the tower will be devoted to a great variety of projects. These range from the study of aquatic life to research in the study of soil genesis and mineralogy.

The Department of Plant Breeding will continue studies in the basic control of inheritance in plants, the breeding of plant crops, and genetics when it moves to the tower. Below that the conservation department will have added facilities for the continuation of Professor Charles Sibley’s work in proteins, and other important projects.

The 3 to 4 story wing adjoining this research tower, will not only provide space for classrooms and administrative functions but will also house many of the University natural history collections. These collections are presently hidden in the crowded facilities of the conservation building.

Financing of this important structure will be undertaken jointly by state and federal organizations. Two federal agencies, the National Science Foundation and the National Institutes of Health, are providing about one-fourth of the funds for the new Agronomy Building.

The construction of the Growth Chambers will be undertaken in two phases. The first phase is a $2 million project consisting of additions to the floriculture, plant pathology, entomology and vegetable crop greenhouses currently in use. These expanded facilities in which the growth chambers will be housed are located across from Morrison Hall and will be used by the Departments of Entomology, Plant Pathology, and Floriculture.

The second phase will consist of a new $2 million building plus greenhouses located at Caldwell and Dryden roads in an area known as Caldwell Field. The Department of Agronomy, Botany, Plant Breeding, Pomology, and Vegetable Crops will each be represented in different sections of the building. The chambers will be used for basic research on plant growth.

The benefits to be derived from these specially constructed chambers will be its ability to control various factors of plant growth such as light, intensity, temperature, humidity and atmospheric conditions. In modifying these variables, valuable experiments will be made.

As in the case of the Agronomy building, these structures will be financed by state and federal funds.
Cornell Research Promotes Sugar Industry

by Michael Whittier '65

For the past two years Cornell University's College of Agriculture has participated in a program that may pump $5 million annually into central New York's economy.

This is the sugar beet project, which involves an eight county area near Auburn, N.Y. Recently the federal government gave this region a 29,500 acre allotment for the specific purpose of growing sugar beets. The grant was the result of a two year research project by Cornell scientists which proved that beets could be successfully grown in that area.

In an interview, Professor Thomas Scott, a Cornell agronomist, discussed the sugar beet situation. "Interest in the production of beets began as a result of the Communist takeover of Cuba," he said. At that time, the United States lost the Cuban sugar supply, and this increased the demand for domestic sugar. The loss of the Cuban market for red kidney beans also affected the Auburn area because it had sold much of its bean crop to Cuba.

According to Professor Scott, "The College of Agriculture provided leadership and research, and carried out demonstration trials for the sugar beet project. Planting and harvesting equipment was made available through the College." Federal funds supported these activities.

Several problems confronted the Cornell researchers in their demonstration trials. Broad-leaf weeds posed one problem, and several cultivations were necessary to control them.

Another difficulty was the necessity for hand labor to thin out the rows of sugar beets. They are planted close together because only about 70 percent germination occurs. The beet industry thinks this problem will be solved in five to eight years, when the entire sugar beet operation will be mechanized.

Other problems were studied, such as varieties of the plant best suited to this area, tillage methods, cropping sequence, fertilizers to be used, and the optimum date of planting.

Eight different departments of the College of Agriculture conducted this research. They were: agricultural economics, agricultural engineering, agronomy, entomology, plant breeding, and plant pathology from the Ithaca campus, and plant pathology and vegetable crops at Geneva.

"From demonstration plots, researchers found the region around Auburn met the major requirements for growing sugar beets," Professor Scott pointed out.

The beets yield best on deep soil with good to moderate drainage. This soil should have a pH of 6.5 to 7 and a high water holding capacity. The beets require a five to six month growing period, and therefore should be planted as early as possible.

A major milestone in the sugar beet plan was achieved when the Pepsi-Cola Company agreed to build a $22 million refining plant near Auburn. Officials say this plant should be in operation by 1965, and will be the first sugar factory in the United States to process both sugar beets and cane. Because of this, the factory will operate the year round and have about 200 permanent employees.

"Pepsi was picked to build the plant because it's already in the Eastern sugar market, it's a large consumer of sugar, and will probably attract some satellite industries," Professor Scott said.

Now that the initial research is finished, the allotment received, and the refining factory assured, what remains to be done?

The Extension Service and county agents will have key roles in making sugar beets a success in central New York. Their task will be to establish a close relationship with the farmers who grow the beets. With the aid of the College of Agriculture's research, the extension workers will help growers better understand methods of planting and cultivation.

The future role of the College of Agriculture in the sugar beet project is best summed up by Professor Scott.

"We'll offer to farmers several alternatives for successful yields. Research getting top priority will be evaluating plant varieties and reducing hand labor. At the same time we'll try to increase the yield and sugar content of the beets."
Guitar, Banjo, and Song

by Lucy Fischer '66

The recent upsurge of interest in folk music is fast establishing it as one of the most popular forms of music in this country. The American college campus has, more than any single factor, been instrumental in bringing about this phenomenal rise in popularity. Cornell University, itself a center of folk music in the Northeast, is no exception to this rule. Sprinkled all over campus you will find many amateur folk artists and enthusiasts.

In view of the popularity of folk music, it is interesting to trace its history in America. There are two main branches of folk music: traditional and popular. Traditional folk singing derived from both our Anglo-Saxon heritage, which has played an important part in lyric and ballad songs, and our African heritage, which has played an important part in the American blues and work songs. By the middle of the nineteenth century, these two lines began merging to produce the beginnings of what we now know as folk song music. Popular folk music is more widespread and commercialized than its traditional brother. It is represented by the popular artists such as the Kingston Trio and Peter, Paul, and Mary. Many purist folk enthusiasts do not consider this latter type of music to be truly folk.

It was in the early 1930's that professional entertainers recognized the worth of traditional folk music and began to incorporate it into their own styles. Jimmy Rogers, the Carter Family, and others were among these early greats. Gradually the music carried over to the college "elite," and the folk fad was underway.

This fad is evident all over campus. Go to any fraternity party and you will find a group of folk singers competing with the Beatles in the next room. Go to the Campus Store record department and you will find a stockpile of popular folk music albums. Why is folk music so popular on campus? Probably because it's an informal, infectious kind of music that lends itself to any occasion, whether it's to participate or just to listen. Start with a guitar or banjo, a few songs, and before you know it a crowd will have gathered round to join in. At a party, folk singing is a great change of pace from dancing and conversation.

In addition to this informal enjoyment of folk music there is an organized group on campus called the Folk Song Club. Peter Yarrow, of Peter, Paul and Mary fame, was a former president of this group. According to Daniel Watt, graduate student and club president, the meetings are very informal get-togethers where people come to sing and "swap" songs. Sometimes, however, there are special programs of instruction scheduled.

Mr. Watt feels that more and more students are becoming interested in folk music. The Folk Song Club used to be a tightly knit clique, but with the increased interest in this music form, meetings are more crowded, with enthusiasts from all over campus joining in. The club has a membership of 70 regular members; anyone however, is invited to come to the Friday night fests.

Mr. Watt has also noticed that more and more students are learning to play folk song instruments. Some have formed semi-professional groups which earn money while singing at various campus functions. Other members of the Cornell community are proficient enough to give guitar and banjo lessons, and earn money this way.

In addition to providing Hootenannies every other week, the Folk Song Club has been responsible for bringing many professional folk artists to campus. This year alone they have sponsored Bud and Travis, the Weavers, Odetta, and Scruggs and Flatt concerts. A folk festival is planned for May 2, which will present many traditional performers. Last year, a weekend seminar was planned where traditional folk artists conducted actual classes at Cornell. Students from all over the Northeast came to attend this series of meetings.

Today there are several hundred professional folk artists in this country, encompassing a wide range of styles. But the real reason for folk music's popularity has little to do with the professionals. It is loved simply because everybody and anybody can appreciate it as a means of self expression and just plain enjoyment.
They Put You in Your Place

by Martin Walzer '64

Alumni of many colleges have often been heard to remark: "If I had only taken more interviews while on campus! I didn't know it would be so hard to seek out employers on my own." Each year over 2000 students graduate from the various Cornell colleges. Whether they have completed undergraduate school or one of the graduate colleges, a great number of them will want to find a permanent career immediately after graduation.

The Placement Office in Day Hall has been organized to help these students. Each year, over 9000 appointments are made for students to be interviewed by representatives of 425 established business organizations from all parts of the United States. For many Cornellians, these interviews have been the start of successful careers.

The Cornell Placement Service is a cooperative effort between individual colleges and departments. The central office in Day Hall, however, attracts students from all schools who may want to find opportunities not directly related to their specific major, or who are in a school where there is no such placement office. The interviews conducted at Day Hall are primarily oriented toward business and government careers, although there are quite extensive opportunities in other fields. Many organizations which offer their own training programs are interested in students regardless of their particular major.

Available at all times at the Placement Office are hundreds of employers' brochures and a complete collection of job openings, including copies of the COLLEGE PLACEMENT ANNUAL, a directory reporting employment areas that various companies are interested in that particular year. For the benefit of all classes, many of these brochures have been placed on open shelves in the first floor west corridor of Day Hall, and are free upon request. In addition, valuable counseling is available from the Placement Office staff. Arts and Science students are required to meet with the staff during the fall if they intend to interview. The staff's expert advice is unquestionably an asset to the student arranging an interview.

Mr. John Munschauer, director of the Placement Office, and his staff act as a liaison between business organizations and students. They schedule interviews in February and March. A secretary is always available to inquiring students who need information or who would like to make appointments with particular companies. The Office also offers a free portfolio including a complete and current list of all companies that are recruiting, the exact date those companies will be on campus, an informative pamphlet describing the interview and what can be expected in it, and material outlining the services and facilities of the Placement Office. In the past, the office has also sponsored fall conferences and exhibits concerning career opportunities for all students.

Information about the interviewing companies and the area of business that they are currently recruiting for is posted in Day Hall and is grouped according to the week the recruiters will visit the campus. The student can then seek out those companies that are of particular interest to him and those for which he is eligible. Interview rooms are located at a number of campus points, including fifteen interview booths in Day Hall. Prior to each interview, the student fills out a résumé for the company representative's benefit. Each interview lasts about a half hour. The experience and confidence alone gained from these sessions make them highly worthwhile.

In addition, the Placement Office has a service that should attract underclassmen as well as graduating seniors. It is very helpful in providing information about summer jobs. Though it arranges no interviews, it does provide forms and addresses of possible openings for summer work.

The Placement Service also acts as a graduate study information center, where a student can peruse professional school catalogues and be interviewed by representatives from graduate schools.

Still further, the Office serves as an alumni placement agent. Alumni who live close enough to Ithaca can arrange to have interviews during the regular period, and information concerning opportunities can be sent to more distant Cornellians.

The Cornell freshman would be wise to familiarize himself with what this service offers. Many successful Cornellians owe a great deal to the effectiveness of the Placement Office in attracting the leading industries to campus. Its absence would make communicating more difficult and expensive.
...helps growers satisfy the preference for top quality in agricultural products. Safe to use, this time-proven chemical prevents and cures most of the fungus diseases that attack fruits, nuts and leafy vegetables. It is compatible with nearly all insecticides for mixed sprays and dusts.

In other ways too, Triangle Brand Copper Sulfate is a fine money-maker for manufacturers and retailers. It is a plant nutrient as well as a fungicide. Particles from pesticidal applications enrich soil with valuable copper. Sell it, too, for full-strength application to mineral-poor earth, at ground level or from aircraft. And add it to mixed fertilizers for extra richness.

Other farm uses: In feedstuffs, to protect poultry and animals from anemia. In pond treatment, to kill algae. In drains, to control scum, odors and root growth. In wood preserving, to prevent mildew and rot. * Triangle Brand Copper Sulfate is available in pentahydrate and basic-form—no grinding necessary.

Write for literature.
Science-Youth Program

Nearly 2100 high school agricultural students from across the state attended Cornell's Agricultural Science and Youth Program, held March 31-April 2. Twenty lectures, demonstrations, and discussions were offered to increase the students' knowledge of agriculture and research underway at Cornell.

“Homework” was assigned in advance for some lectures, including a farm management problem for “Analysis of a Farm Business Problem” and preparing a weld for “Do Your Oxyacetylene Welds Hold?”

Other topics covered were “Some Social Problem Under the Microscope,” “Color in Conservation,” “Plant Disease Control,” “Take the Guesswork Out of Feeding,” and “Making Better Forage Seedings.”

Professor Retires

Professor Harold A. Willman of the animal husbandry department, well known for his work with youth, retired April 1. He supervised 4-H work in New York state for nearly 35 years.

Born and raised in Pennsylvania, Willman received his B.S. degree in animal husbandry from Penn State University, and his M.S. degree from the University of Minnesota. Later he enrolled at Iowa State University.

After serving as county agent in Pennsylvania, Prof. Willman accepted a position at Cornell University in 1929.

Committee Appointed

James A. Perkins, Cornell University president, recently appointed a nine-member committee to begin studying the future role, programs, and organization of the New York State College of Agriculture at Cornell.

“This committee will identify the major questions to which the study should address itself,” said Perkins, “and suggest the appropriate organization and procedures for the study, which we intend to undertake shortly after receiving the committee’s recommendations.”

Dr. James G. Horsfall, director of the Connecticut Agricultural Experiment Station, heads the committee of three off-campus experts, three College of Agriculture faculty members, and three faculty members from Cornell’s endowed units. The committee will convene on campus May 1-2.

Rice Speech Winners

Carol Green, a sophomore in the New York State College of Home Economics, won the 1964 Elsie Van Buren Rice Home Economics Public Speech Stage competition on March 4. Miss Green won the $100 first prize with her eight-minute speech, “The Nonconformist.”

The speakers were judged on handling of subject matter, organization, manner of presentation, language, and total impact of the speech. Carol Green will deliver her speech again on April 11 as part of the College Honors Day Program.

Recreation Survey

A survey taken last summer of 72 businesses in 33 counties indicated a rise in privately owned, commercial recreation enterprises in New York State. More than one-half of the operators surveyed owned their land as a farm before developing it for recreation. In four out of 10 cases farming is still providing the main portion of the family income.

Professor H. B. Brumsted, program leader, Rural Resources Development, and Donald M. Tobey, a Cornell student, made the survey. It will aid the departments of conservation and agricultural economics of the New York State College of Agriculture in their counseling of public and private agencies.

Mann Fire

The oral and written expression section of the Department of Extension Teaching and Information have returned to their penthouse quarters on the fifth floor of Mann Library. Their offices suffered heat and smoke damage in the estimated $100,000 blaze on March 14th. Workmen have replaced the old homosite partitions with sheet rock for better fire protection.

The northern half of the fifth floor, housing the free-hand drawing section of the ornamental horticulture department underwent severe fire damage. The blaze started in an office at this end of the building. The repair of this section will require state funds.

The Safety Division believes the fire originated from a burning cigarette in a desk ashtray.
HAROLD F. KEYES '14, 173 Woodland Dr., Orchard Park, N.Y., did extension work and was a county agricultural agent until 1923. He then entered the teaching profession and retired in 1962 after thirty years of service. He is the director of the Buffalo Eye Bank and Research Society.

CHARLES COMFORT '15, RFD 2, Middletown, N.Y., has been secretary of various organizations, including the Wallkill School Board. He was a GLF buyer in Circleville from 1922 to 1924, and also operated a farm until 1958. His hobby is researching family history.

LAURENCE MacDANIELS '17, (Ph.D.) 422 Chestnut St., Ithaca, N.Y., was a Cornell faculty member from 1912 until his retirement in 1956. He began teaching in the botany department, and was later head of the department of floriculture and ornamental horticulture. Since retirement, he has worked with the Cornell Contract in the Philippines, and with the AID technical assistance program in Yugoslavia.

KENNETH WILLIAMS '22, Amish/Maag, APO 205, New York, N.Y., is a parish priest in Iran, and has a long history of missionary work in China and Panama.

DAVID S. COOK '24, 19 Collingsworth Dr., Rochester, N.Y., is assistant to the president at General Dynamics & Electronics, in charge of Public Relations and Advertising. He is a former Cornell Countryman editor, and past national president of Alpha Gamma Rho fraternity.

MRS. DONALD SMITH PORTER '27, RD1, Perry Rd., Baldwinsville, N.Y., has worked as a columnist and editor of various magazines and newspapers, including the Dairymen's League News. She was also the Women's Publicity Director of the New York State Fair in 1950. Since 1957, she has taught English in Baldwinsville schools.

MORTON ADAMS '33, RD 1, Sodus, N.Y., has had an extensive career in extension and county agricultural work. Since 1963, he has been president of Currie-Burns, Inc., of Rochester. He is a member of many organizations, but still finds time to raise trotting horses and crossbred lambs on his farm near Sodus. His sons attend or were graduated from the Cornell College of Agriculture.

IRVING GRANEK '35, 100 President St., Lyncbrook, N.Y., is laboratory supervisor in the USDA's Plant Pest Control research division. In 1956, he received the USDA superior service award for his work in nematology (the study of roundworms, such as the trichina worm).

MRS. ESTHER ARONSON ROTHENBURG, 35, M.D., 501 Gramatan Ave., Mt. Vernon, N.Y., taught biology for a brief period, and began practicing medicine in 1941. She is a member of local, county, state, and federal medical societies, and raises African violets for pleasure.

LEON H. MEHLENBACHER '42, Route 1, Paul, Idaho, was a district agricultural engineer for the N.Y. War Council from 1942-1945. Afterward, he farmed in New York until 1963, when he moved to Idaho. He has been active in Farm Bureau and extension service committee work.

NORMAN HECHT '47, Box 282, Walden, N.Y., started a small commercial hatchery in Montgomery after graduation. The business had grown so much by 1952 that it was moved to larger quarters in Walden. Currently, Mr. Hecht's baby chick and pullet sales cover a radius of 400 miles around Walden.

WILLIAM EBERLE '50, Oak Tree Rd., Palisades, N.Y., was a bacteriologist for General Foods Corp., and has been a patent lawyer since 1955. He is a member of the American Bar Assn. and American Patent Law Assn., and is a trustee of the South Orangecounty Central School Board of Education.

PETER CROLIUS '52, 15-B University Park, Orono, Me., has become the new Director of Development at the University of Maine, Orono, Maine.

CONRAD OLIVEN '53, 139-48 85th Drive, Jamaica 35, N.Y., joined the staff of the Agricultural Development Council this past December. He will help produce agricultural development training materials for middle-echelon technicians in developing nations. He will also edit the Council's publications.

BARBARA M. HALL '43, Ithaca, N.Y., is Women's Editor for radio station WHCU. She was a group leader to Denmark and Sweden for the Experiment in International Living, Putney, Vt., and a member of the American Women in Radio and Television.

GEORGE EMDE JR. '53, Lodi, California, who was a member of Cornell's winning International Livestock Judging Team in 1952 and a member of the National Agricultural Honorary Society, sold his herd of 178 Polled Herefords that he started twelve years ago. According to the American Polled Hereford Association it was one of the top herds in the West this year.

* * *
New GLF #1550-14 Dairy Formulets...more TDN per dollar

Right now this new GLF pelleted dairy feed will lower your feed costs, and still keep your herd at capacity production. Why?

Because the new GLF #1550-14 gives you more total digestible nutrients for your dollar than any other GLF dairy feed—at least 1550 lbs. of TDN in every ton.

And this high TDN, 14.5% protein feed is an ideal forage supplement. (Good quality forage is relatively high in protein.)

GLF #1550-14 is 100% pelleted. This makes the feed highly palatable to your cows, and free flowing out of bulk bins.

Vitamins A and D, and trace minerals are added to give your cows an extra boost in herd health.

And New GLF #1550-14 Dairy Formulets is priced to lower your feed costs now!

Call your GLF today. Take advantage of the cost reducing price on this high TDN feed — GLF #1550-14 Dairy Formulets.

And, if you are not already enrolled in GLF’s Profit Feeding Program, ask for details. This outstanding approach to profitable dairying has now been used on over 5000 farms—85.1%, with DHIA records have already reported net income increases up to $62 per cow.


GLF DAIRY FEEDS & SERVICES
IN THIS ISSUE

Spring Weekend "The pause that refreshes" ................................. 3
Cornell Sings to the World ...................................................... 4
The Bee Flight Room .............................................................. 5
Song of a Coxswain ................................................................. 6
Pollution—Nature Fights Back .................................................... 8
The House That Art Built .......................................................... 9
RAD—RRD—A Face for the Future ............................................... 10
Countryman Capsules ............................................................... 12
Alumni ..................................................................................... 13

Staff

Editor-in-chief ................................................................. Peter Monnier '65
Managing Editors ......................................................... Susan Isler '65 and Owen Wavrinek '65
Circulation Manager ..................................................... Renate Rabeler '65
Librarian .............................................................................. John P. Lowens '65

Freshmen: Marjorie Case and Donald G. Semmler.

Cover: The Cornell Crew by Miss Toni Gailey '65.
When you 
drill·tap·form·mill·shape 
all in 22 seconds...

what do you 
use for oil?

That's the kind of problem a sales engineer here at American Oil comes up against. It actually happened to Bob Turley when the Schwinn Bicycle Company asked him what oil he'd recommend for this complicated metal cutting problem. He had the answer—one of our special cutting oils—he solved the problem, and made the sale.

Bob's a graduate of Purdue—and the American Oil Company Sales Engineering School. He knows machines and oils. He's our "outside" man with the inside track on lubricants. And, he likes meeting people. That's why he's a sales engineer, combining two fields into a successful career.

Bob's a mechanical engineer. Yet, he might have been working for us if he were a metallurgist, chemist, mathematician or physicist. Petroleum takes on a multitude of uses and requires people of every skill. For information regarding a career in sales engineering or other fields, write to C. L. Wells, Room 1036, American Oil Company, 910 S. Michigan Avenue, Chicago, Ill. ZIP Code 60680
Farm equipment lives up to its design with the extra strength and endurance . . . the extra HARVESTPOWER of Link-Belt chain

HARVESTPOWER to spare! It's built into every strand of Link-Belt chain. Extra capacity to withstand starting, shock, and dynamic loads . . . to provide the trouble-free transmission of positive power at that all-important time when it's really needed . . . season after season.

The superior HARVESTPOWER of Link-Belt chain is a result of many manufacturing refinements. These processes—which go beyond ASA dimensional standards—add up to chain that excels in strength and durability. Today, over 300 farm machine manufacturers are taking advantage of the extra measure of HARVESTPOWER built into Link-Belt chain.

Link-Belt offers industry's most complete line of drive and conveyor chains, chain attachments and sprockets. Also "bonus" services: application counsel, field analysis, laboratory service and others. These services multiply the value of Link-Belt chains, but not the price!
SPRING WEEKEND

"The pause
That refreshes"

by Ken Goldstein '64

AFTER BRAVING the bitter
cold winds, snows, sleet, hail,
and rain of the blustery North, the
glimpse of unobscured sun or a
small budding flower is like manna
from heaven to the Cornellian.

In fact, spring in Ithaca to the
average Cornellian who has sur-
vived the winter is so wonderful
that he just can't get enough of it.
Thus, he usually goes into a fresh-
man, sophomore, junior, or senior
slump, so he can have more time
to run barefooted through the
blooming fields.

The slump problem is not a new
one. Spring in Ithaca back in the
good old days was just as wonder-
ful to the student body as it is
today.

In 1901, Cornell's understanding
faculty looked upon the cold, bar-
ren life of the students and per-
ceived a way of breaking the annual
spring fever epidemic to which most
Cornellians were susceptible. And,
at the same time, they saw it as a
way to rescue the Athletic Associ-
ation from its low financial straits.
The faculty thereby created a
spring day and let it be known to the
student body that this special
day was devoted to pure bedlam
as long as it didn't get out of hand.

Two years later, in 1903, spring
weekend had proven to be so suc-
cessful that it was formally estab-
lished as a permanent institution.

The weekend of that year started
out at 2:00 one dark Friday morn-
ing when a special train arrived in
Ithaca bearing wagons, tents and
other necessities.

Later, during the early morning
hours, two large tents were erected
for the main and side shows of
what was to be a giant carnival.
Peanut and lemonade stands sprang
up like weeds. At about 9:00, ac-
cording to the Alumni News of that
year, "The grounds began to fill
and from then on until the climax
of the program (the thrilling para-
chute drop from the library tower
at 1:00) the spectators were kept
in a continuous roar of laughter.
Not until noon, however did the
excitement reach its height. At that
time, all University exercises were
suspended for an hour in order that
the students might give their un-
divided attention to the celebra-
tion."

The finale of the day's program
was a performance comprised of
the glee club, a hobo chorus and a
professor who challenged any coed
in the audience to stand up before
him for four rounds. He was, of
course, beaten.

By 1905, spring weekend had be-
come one of the most important, if
not the most important, celebration
of the year. In that year, the main
attraction was a bullfight, which
was publicized as having genuine
imported bullfighters. These fear-
less matadors (who were actually
Mexican students) cautiously en-
tered the bullfight arena, which had
been erected on the Sage Lawn.
With fearless demeanor they fought
the bull (which was really a baby
carriage in disguise), until it was
subdued.

Every year thereafter, with the
exception of those of the First and
Second World Wars, all loyal fun-
loving Cornellians looked forward
throughout the winter to the pa-
rades, floats, carnivals, dances,
shows and sport events.

Eventually, though, the student
body grew so large that a common
celebration became impossible.

Thus, in 1931, the Alumni News
wrote that, "Although Spring Day
will have no carnival, it still offers
an unusually interesting program.
The carnival, a traditional feature
of the holiday morning, has been
abandoned. Once the bright spot of
the day, the carnival in more re-
cent years no longer provokes the
interests of students and it has been
allowed to die a natural death."

Today, with a student body of
over 12,000, Cornell still has its an-
nual spring weekend and it more it
still is the bright spot of the scho-
lastic year, but gone are the all-out,
university wide, often unforgettable
events.

In their place are somewhat more
exclusive celebrations, centering
mainly around the various fraterni-
ties on campus which, if not as
public, are just as enjoyable as
those wild spring days of the past.

This year, there will be only two
events during spring weekend which
will be university wide. One of these
is a play entitled, "The Mistress of
the Inn", which will be produced
by the Cornell Dramatic Club. The
other event is a concert to be given
by the Brothers Four, during which
the elected queen of spring weekend
for 1964 will be seen.
Cornell Sings to the World

by Linda Jensen '66

Shortly after Cornell University was founded, a group of men joined together to form a singing organization. As the years passed, the group gained in prominence and established a reputation of excellence.

Today the descendant of that meager beginning, the Cornell Glee Club, is considered to be one of the finest collegiate singing groups in the country.

Concert tours have played an important part in the history of the Glee Club. In 1880 the first tour took the club to Syracuse and Auburn. Today the club can boast of travelling to Europe, Russia, and many of America's major cities. They have appeared on television and radio programs and have cut many long-playing albums.

During the winter of 1960-61, the club toured England and the Soviet Union. While in Russia during Christmas vacation, they held a joint concert with the 115-voice Academic Choir of the University of Leningrad. They were also televised by Moscow television and heard over Radio Leningrad. Many of the songs in their repertoire were by Russian composers.

Immediately following the Glee Club's tour of Russia, was a five-day tour of England. The tour included concerts in Westminster Abbey, the Royal College of Music, and the United States Embassy in London. The group was again televised; this time by the B.B.C. network. The tour of 1960-61 was a great success and the group was asked back to England in 1963 during the summer.

During the recent tour of the Glee Club in England, they again appeared at the Royal College of Music. They also gave concerts at St. Paul's Cathedral, Eton College, and Oxford, to mention a few.

The club has domestic tours every year and in the spring of 1963, they gave concerts in Boston, Long Island, New York City, and Schenectady. This past Christmas they toured Pittsburgh, Cincinnati, Patterson Air Force Base, Cleveland, and Chicago. The Glee Club has also appeared with the Rochester Philharmonic Orchestra and accompanied by the University Chorus, has performed Beethoven's Ninth Symphony.

The Glee Club gave an April concert. It was the world premiere of Nabuchodonosor, which was written by Robert Palmer, and dedicated to the club. Nabuchodonosor tells the story of Shadrach, Meshach, and Abednego and was described by one of the club members as being very modern. Two guest soloists, Mr. William Flavin of Boston and Mr. David Beckwitt of Washington, D.C., appeared in the April concert.

In 1957, Thomas A. Sokol was appointed director. Mr. Sokol, an associate professor in the department of music at Cornell, has had extensive experience in the field of choral music, having served as acting director of choral music at the New England Conservatory, assistant conductor of the Harvard Glee Club and Radcliffe Choral Society, assistant choirmaster of the Harvard Glee Club and Radcliffe Choral Society, assistant choirmaster of the Harvard Glee Club and Radcliffe Choral Society, assistant choirmaster of Harvard, director of music at Belmont School in Boston, and assistant professor of music at Newton College of the Sacred Heart in Boston. Mr. Sokol has recently been doing research in Russia on his sabbatical leave.

The club itself is completely student run. The students arrange tours and concerts and handle their financial needs. Most of their income comes from record sales, tours and Ithaca concerts. The club is also independent of the University.

Any student at Cornell is eligible to try out. At present the club consists of 140 members, of which 78 are active. They spend about three hours a week practicing. The group annually gives a Fall Weekend Concert and performs for the University at Convocation and any other time the University calls on them.
The Bee Flight Room

by Michael Whittier '65

WHILE MOST bees in the frigid Northeast hibernate during the winter, certain honeybees on the Cornell campus fly, collect food, and produce young during the coldest days of the season.

They are "residents" of Professor Roger A. Morse's bee flight room in the basement of Comstock Hall. According to Morse, a professor in the department of entomology, "The room is designed to study the social structure and reproductive processes of bees, especially honeybees."

The evolutionary development of bees from solitary insects to creatures with a complex social structure provides a focal point for research. How did the honeybee evolve to its present form and what mechanisms govern it as a social animal? These are a few of the questions Dr. Morse eventually hopes to answer.

In his experiments with honeybees, Karl von Frisch, of the University of Munich, found that bees communicate information about food sources in the field by dancing. Their dance indicates the distance and direction of a food source, as well as its quality.

Bees also communicate by sound and odor. There is an alarm odor, a sex attractant, and a colony odor to mention a few. "The flight room controls the variables of light, temperature, humidity, and day-length. Because of this, it's possible for us to study the dance, sound, and odor of bees, as well as other forms of communication," Professor Morse said.

The bee flight room is constructed much like a very large growth chamber. The room is 8' by 20' inside, and contains a false plastic ceiling with four banks of lights above. By controlling these lights, the illusion of sunrise, daylight, sunset, and darkness can be given.

An unusual feature of the flight room is its time clock, which is set for a given latitude. This clock can simulate conditions for every month of the year at 40 degrees latitude. The temperature and humidity of the room are controlled by special sensing elements that operate in coordination with the time clock.

Another aspect of the flight chamber is its unusual length. It was designed to allow the bees enough room for actual flight. Swarms or colonies of bees are put at one end of the room where they cluster around the queen, who is confined in a special queen cage. The food, a pan of sugar syrup, rests on a table at the opposite end of the chamber.

Professor Morse has found that the number of bees leaving the swarm to fly to the sugar syrup depends almost entirely upon the amount of food they sense is available. Light does not influence foraging as long as there is a certain minimum intensity.

Although much time has been spent in making adjustments of the equipment in the room, a few specific tests have been run.

In one test, Professor Morse experimented to discover how light influences wax secretion and comb construction in a honeybee colony. He found that light is a factor in comb construction only.

"Preliminary results indicate that light inhibits comb construction, but not wax secretion by honeybees," explained Dr. Morse. This phenomenon is biologically significant because it explains why combs are not usually built in the open, where the bees would have little protection.

Professor Morse has also determined that confinement does not pose a problem because the bee colony behaves normally in the flight room. The bees have even produced young under the artificial conditions.

However, when a colony was first placed in the chamber, Dr. Morse discovered that landmarks were needed by the bees for orientation. This created the only major problem the researcher has faced so far. For the first five days the bees wouldn't fly because the room walls were too shiny. A few pieces of red construction paper were attached to the walls to serve as a landscape.

The bees immediately oriented and began to fly.

Because of Professor Morse's research, the fascinating world of the honeybee will be made clearer to us. But only time will tell if he can accomplish his long range goal of discovering how the honeybee evolved into a social insect.

(1) Bees constructing comb in the flight room and (2) the finished comb three weeks later.
YOU SIT STILL and silent in the shell. Your body is tense and vibrant. Your muscles feel a surge of blood. You are poised, ready for the first stroke. You’ve got to keep pace. You can’t fatigue. The other oarsmen are counting on you. You know you must give your supreme effort. The gun sounds—stroke—stroke. We’re off. It’s going smooth—we’re gaining, we’re moving out. You bend your back to the song of the coxswain. The rhythm is good—we’re ahead. Can’t relax. Got to work harder—they’re gaining on us, faster, faster, faster—got to push it—let’s go—they’re gaining, they’re moving up—need a faster beat, stroke, stroke, stroke. The finish line—the last stroke. Cornell crew has won again.

The Cornell Crew started back in 1869. Since those days crew has grown into one of Cornell’s finest traditions. The first Cornell Crew was an outgrowth of the old Udine Boat Club—which was probably the first organized sport on the hill.

In the beginning, the crew was appropriately called “The Navy.” It then numbered six. In 1875, Cornell’s six rowed against a field of 12 of the best college crews in the country at Saratoga. The upset victory gave the Cornell oarsmen national fame and university recognition as a school sport. Sweeping the race at Saratoga again in 1876, the Cornell legend of powerful crews began to develop.

When Cornell recognized professional coaching in 1883, and hired Charles E. “Pop” Courtney, crew had its first professional coach. Pop Courtney was to become one of the greatest coaches in the history of rowing. His reign as coach of Cornell Crew teams from 1883 until his death, at the age of 72, in 1920 left a remarkable record of victories and some of the greatest crews in Cornell’s history.

An interesting but untrue legend has it that in 1920 Courtney was the spirit that gave Cornell its triumph in the Intercollegiate Regatta held in Ithaca. The story goes that sometimes Courtney thundered at his crew—they knew he did at the regatta. Pop was very ill at the time, but demanded to be taken to the race. He had hopes for his underdog crew and he wanted to cheer them on. From the shore, he watched his men pick up the stroke. But the ailing coach could not take the strain, and as he was cheering his crew, Charles E. “Pop” Courtney was stricken with a heart attack and died.

Legend says that at the moment of his death a storm came up and in the thunder of the storm, the crew heard their coach’s spirit cheering them to victory. With a great surge, the underdog Cornellians pulled ahead and won the race in tribute to their departed coach. So ends the legend of Pop Courtney, the “Grand Old Man”.

SONG OF A COXSWAIN

by Bob Fistick ’65
John Hoyle, Courtney’s assistant for over twenty years then became head coach of the crew team. Hoyle had difficulty in building the crew in the Courtney tradition and in 1924 Charles A. Lueder ’02, was named as head coach. Lueder also had problems, climax by a last place finish in the Poughkeepsie Regatta in 1926 and right after the race Lueder resigned.

In 1927 Cornell summoned the services of James Wray. As coach of Harvard, from 1906 through 1915, Wray’s crews defeated Yale eight times. It didn’t take Coach Wray long to build Cornell into a powerhouse once again. His crews sported a fine record and in 1936 he closed out his career.

Again, Cornell was in need of a mentor. Called to the helm was Rollin Harrison “Stork” Sanford. Stork was a member of the great University of Washington Crew from 1923 until his graduation in 1926. Several other members of that Washington shell also became famous coaches in the sport.

At the onset of World War II, Cornell almost gave up the crew. But through the efforts of Stork and a group of the crew, and several oarsmen from Princeton and Pennsylvania, they continued rowing under the V-12 program of the Navy unit.

After the war, crew officially started again. The Poughkeepsie Regatta, or the “Inter-Collegiates” (IRA), were not held in 1946. Instead, a 2000-meter race was arranged in Seattle, Washington. Harvard, Washington, California, M.I.T., Yale, Wisconsin and Cornell competed. Cornell won. The meet was held again in 1947 at Seattle but Cornell placed a lowly fourth to Harvard.

In 1937, 1948 and 1949, the Inter-Collegiates were held, as usual, at Poughkeepsie. But in 1950 Poughkeepsie had to be give up as the site for the annual event because the facilities were becoming overcrowded with an increasing number of competing crews, so the site was moved to Marietta, Ohio that year. A terrible thing happened, however, before the race. The Ohio River flooded, and the crews not only had to battle each other, but also a multitude of debris and heavy currents.

The Ohio was tried again in 1951, but the night before the meet the Ohio River flooded! Three shells were submerged during the race and several others were nearly swamped.

Finally in 1952, the Inter-Collegiates were moved to Syracuse’s Onondaga Lake where it has been held ever since.

During this time the Cornell crews were holding their own. 1952 was an Olympic year and Stork persuaded the University to build a two-man rowing tank for conditioning during the winter. Cornell’s efforts turned out to be futile, with the great Navy crew winning the trials. Navy dominated the crew scene through 1954.

But in 1955 the complexion of the Cornell crew changed. Moving into new Teagle Hall, the crew now had two eight-man tanks and could condition and train during the winter months. Gone were the days in the old Armory with the rowing machines. The effect of the tanks was noticed immediately. Cornell swept the Inter-Collegiates in 1955 and the Varsity crew won through 1958! And in 1958 Cornell again swept the IRA regatta on Onondaga Lake. The 1957 crew, considered by many as Cornell’s best in recent years, went to the Henley Regatta in England and rowed to victory.

The 1959 crew produced no great records, but the 1960 crew was one of the most unusual in Cornell’s history. Stork, after losing his varsity stroke to an institution called probation, had to train a new stroke. He found two men for the job and coincidentally produced two equal heavyweight crews! Stork found it so difficult to achieve one superior shell that during the week before the race the crew with the better time trials became the varsity and the other the junior varsity. Throughout the season the two teams interchanged and still continued to win!

Crew in the tanks at Teagle Hall with Stork Sanford

The 1961 season produced a winning crew and Cornell rowed to victory at the Inter-Collegiates during 1962 and 1963.

This season, 1964, is once again an Olympic year. And Cornell is again a powerhouse in contention for the Olympic laurels. But, according to Stork, “Navy is the crew to beat.”

This year several boat clubs are entering the Olympic trials. In the eastern sprint trials last year, Cornell upset the world champion Ratzeburg Club of West Germany, only to lose in the final. These boat clubs were encouraged by the Ratzeburg showing against a collegiate crew and they pose a serious threat to the top college crews.

Stork feels that, “Although Navy is the crew to beat in 1964, Harvard could be trouble. As a result of early races Princeton and Yale also appear to be formidable.” Continuing he says, “The Cornell Crew is very much like last year’s crew—there are six returning heavy-weights.” Stork calls it “a veteran crew—a sophomore, junior squad—lots of potential. Navy, however, is at an advantage because of depth and experience.” Stork continues, and he feels that the prospects for 1964 “are excellent for Cornell.” He concludes in saying, “We are competing in the Olympic Trials in July and hopefully, in the Olympic Games.”
Pollution
Nature
Fights
Back

by Renate Rabeler '65

WHEN SUMMER gets in full swing this year, millions of people will be heading for the lake and ocean beaches which offer that cool relaxation so welcome after a long, hot day. Some of these people are going to be greatly disappointed when they take their first refreshing dip. These people will notice that the water isn't as clear as it used to be, or that it just looks, feels, smells and tastes impure. The problem in large part of these cases could be pollution of a specific type, mainly, that caused by treated or untreated waste products of man entering the water.

Recently, John P. Barlow, Professor of Oceanography at Cornell University was awarded a public health service grant to study the Great South Bay area of Long Island, New York, where pollution has been extreme. With this grant he will attempt to establish a relationship between the amount of waste products and the concentration of oxygen present in the water.

According to the Cornell Professor, pollution can be visualized as a self-perpetuating cycle. The cycle is begun when, for instance, sewage is dumped into the water. If it is untreated sewage, (that containing all original organic matter), it is immediately acted upon by bacteria which gradually break it down to elemental chemicals, mainly those containing nitrogen and phosphorus. In this simple form the waste is equivalent to pre-treated sewage or that sewage which has been broken down artificially to chemicals before it is placed in the water.

These chemicals then act as fertilizer to minute marine plants known as algae. The algae begin to thrive and multiply and eventually grow so thick that they cut off almost all sunlight from the plant life below the waters surface. Here, new forms of bacteria appear that can thrive without sunlight, consume oxygen, and give off toxic, often offensively odorous wastes. These bacteria flourish and eventually reduce the concentration of oxygen in the water to such a low level that fish and other marine life cannot live. They also give the polluted water its characteristic rotten stench.

When algae die, their corpses sink to the bottom and are decomposed by the bacteria. This decomposition results in a new supply of fertilizer for another cycle of algae and bacterial growth. The process becomes self-perpetuating, and will continue long after the flow of waste matter that originally initiated the cycle has been stopped.

Not all bodies of water are susceptible to this kind of pollution. According to Professor Barlow, constantly circulating water such as is found in a mountain stream will dilute and oxidize the organic fertilizers, reducing their effect. On the other hand, a slowly moving, enclosed body of water could be very prone to such pollution. In an area such as the Great South Bay, for instance, where Professor Barlow intends to concentrate his study, man has dug many channels and bays for his boating facilities. By doing this he has often changed currents and created deep pits where organic and chemical wastes can and have accumulated, causing a pollution problem.

But why does pollution appear so suddenly? This is the question that the Cornell Oceanographer hopes to answer by establishing a relationship between the amount of waste and concentration of oxygen present in the water. He also hopes to discover how the special plant life found in these polluted areas become adapted to the extreme conditions, and the effects of man's wastes upon this plant life.

If the answers to these questions are found, the causes of pollution will be better understood and in time perhaps, pollution will no longer be the problem it is today.
The House That Art Built

by Ken Balmas '65

THIS YEAR the Andrew Dickson White Art Museum on the Cornell University campus celebrates its 10th anniversary. Plans for converting the $100,000 mansion to a museum began in 1951 when the then newly appointed University president Deane W. Malott declined to live in the house because it was uneconomical to run. He was instrumental in establishing it as an art museum.

The mansion itself was built as a home for President White and his family. It was completed in 1893. President White paid for its construction and lived there until his death in 1918. It has also served as a residence for Cornell University presidents Livingstone Farrand and Edmund Ezra Day during their administrations. When its conversion to a museum was decided upon, a fund was supplied by one of President White's nephews, Ernest T. White, '93, of Syracuse, N.Y.

Appointed by President Malott as the museum's first director was Alan R. Solomon, who was then a faculty member in Cornell University's Department of Fine Arts. He had received his museum training at Harvard University. Under the capable director the museum gradually became distinguished.

The first exhibit, in November, 1953, was of an outstanding collection of photographs of Japanese architecture borrowed from New York City's Museum of Modern Art. Another early exhibition was a nine month loan of modern paintings from the Guggenheim Museum in New York. This loan was secured as part of the Guggenheim Museum's radical innovation of making loans for the purpose of decentralization of culture.

The White Art Museum is far from being restricted in function to a show place. Extensive use of its facilities is made by the Department of Fine Arts in the Cornell College of Architecture, and by the Department of Housing and Design in the New York State College of Home Economics. Also presently included in the building are facilities for the president's use in state entertaining, and a study for the president equipped with furniture used by Cornell's first president, Andrew D. White. This includes a 300 year old table inlaid with the Russian imperial eagle. It was bought from the American embassy in Moscow by Mr. White.

A number of artists on the Cornell faculty and in the student body have had the first showing of their works at the museum. Further, the museum's area of distinction, modern art, is in itself educational, offering an unusual opportunity for the university community to note trends in the works of today's rising artists.

The White Art Museum has had many unique exhibits. In December, 1953, French and Italian fountain designs were shown dating from the 17th to the early 19th centuries. A highlight was the rococo art, from the early part of this period, showing water spouting from a variety of unusual spots forming an elaborate design. In January, 1954, a super-stereoscope of the 1870's was received from the estate of Carter R. Kingsley of Bath, N.Y. It was handcarved in Italy, and was known as a megalestoscope. It produces pictures prepared with pinpricks and bits of colored paper. These create realistic effects of fire, light, and color. "Evangeline," an original pastel portrait by the 19th century French artist, Emile Jules Saintin, was later given to Cornell by Mr. and Mrs. Maganini as part of their yearly gift of works of art for the University. This portrait of "Evangeline" was inspired by Longfellow's "Evangeline." It was acquired by Mr. Maganini in the lounge of the DeWitt Clinton, a Hudson River Day Line boat, when the Day Line boat company stopped running.

No matter what the exhibits, however, the results of them are always the same. The Andrew Dickson White Museum was created to, and has given the Cornellians who have browsed through its ornate halls, a better understanding of those things that might otherwise be missed or lost in the maze of our complex and sometimes incomplete education.
IN A TIME of national prosperity, how many rural New York communities are headed for “depressed area” classification? Mechnization and technological advances keeping the United States a world leader in agricultural production leave behind ever-widening wakes of unemployed men and idle lands. Labor saving devices used in sawmills and other local industries reduce the demand for unskilled labor, and cut off possible sources of supplemental farm income. Those who are able, migrate to cities, where their hopes for improved circumstances end in success or relief support. As population dwindles in rural communities, the tax base also shrinks, small local stores are forced out of business, remaining residents’ average age rises, and the community is well on the way toward becoming a depressed area.

More often, the situation isn’t so serious. Nevertheless, in many rural areas the likelihood of economic and social development seems too limited to encourage college graduates or other aspiring residents to remain in the community.

“Reversing the trend of apathy and downward economic drift, eliminating agricultural inequities, low farm incomes, wasted manpower, and efficiency is the aim of the federal Rural Areas Development Program (RAD),” says Secretary of Agriculture Orville Freeman.

Elaborating further on RAD’s objectives before the American Bankers Association, Freeman said: “We now face a new and stimulating challenge. We do not need all our land to produce food and fiber, nor do we want so valuable a resource to stand idle and unused. People are moving from the country to the city, but most of the people of the city travel at some time to the country to enjoy the benefits and pleasures of the outdoors... and to harvest the recreation potential of our land and water.

“Therefore, we seek to develop these and other new uses for the land and other resources of the rural community... and in so doing to create new economic opportunity to bring new life to rural America. This is the task of RAD.”

RAD’s success hinges on local people, local and federal agencies, and numerous other organizations working in unison, added Freeman. “Massive national investments alone are not the answer. The change must come from the people. Our biggest job has been to stimulate and activate local people to help themselves.”

Though federally sponsored, most of RAD’s work is done on a local level through county agents and extension workers. Every agency, such as local banks, industries, churches, and civic groups, that has something to contribute is encouraged to participate. The Farmers Home Administration, the USDA, and other organizations back local RAD projects with technical and other specialized assistance. The results?

Secretary Freeman reported 110,000 permanent jobs created by local RAD committees in 1963. In New York State, more than half the counties are involved in rural resource development programs. Local interest was demonstrated by more than 15,000 participants in Operation Advance, an extension sponsored discussion series about “Resources—Land, Water, and People.”

Chairman of the State RAD committee is Harold L. Creal, Cornell alumnus, director of the NY. State Fair, and a dairy farmer in Homer, N.Y. Local committees are organized by county agents working through the State Extension Service.

RAD - RDD
A Face for The Future
by Toni Gailey '65

Waste spot developed by a commercial farm family.
Farm house, before (left) and after (right)

Assistant Secretary of Agriculture John A. Baker lists the following as Extension Service responsibilities:

"The initial responsibility of Extension is to bring together representatives from all interest and leadership groups who might make a contribution to such efforts. Through group participation, these community leaders will be assisted in focusing attention on area problems and the possibilities and potentialities for resolving them. The aim will be to motivate local initiative and to help local leaders appreciate the people’s needs and the opportunities for fulfilling them.

"The second responsibility of Extension will be to assist local leaders in providing the type of organization needed to get the job done.

"State and local committees should utilize the substantial research and education competencies of the Land-Grant Universities to the fullest possible extent in evaluating and implementing development proposals."

Lending support to State RAD work is a Cornell Rural Resources Development Committee (RRD) headed by Harlan Brumsted, who is now with the N. Y. S. Cooperative Extension Service. The Cornell committee, including College of Agriculture and Home Economics members, reports to the State RAD organization and is concerned with “development of broadened awareness of the program among key leaders and the general public throughout the state; providing agents and county committees with background data, specific subject matter and further improved filing systems; developing the necessary in-service training for county agricultural agents."

"The RRD program functions locally on a county basis to explore the means for economic growth and social development. Ideally, all this is brought about by a super-cooperating and coordinating effort by private and public agencies," comments Brumsted.

What does all this mean to rural New Yorkers? RAD and RRD programs are designed to help solve community and individual problems. Community projects might include attracting new industry or tourist trade, developing public recreation facilities, new land-use programs, water pollution problems, or giving Main Street a face-lifting. Individuals may obtain Farmers Home Administration loans up to $60,000 to develop unprofitable land or facilities for recreational purposes.

"Interest and enthusiasm is high in RRD committees," says Harlan Brumsted, "and many rural problems are statewide in importance." RAD-RRD programs are not limited to problem solving; many plan for the future by developing community potential.

Speaking at RRD regional meetings in April, Lawrence Hamilton, professor of forestry at Cornell, said, "Water pollution is now and will, in the future, be the major water resources problem. Present trends in use of water resources point to increasing competition and conflict among users. The increasing re-use of water which is predicted will raise the price of water. It is thus a wise community that anticipates these trends and takes steps now to assure that lack of enough clean water at a reasonable price does not stifle its economic and cultural development."

Some of the most recent New York "look-ahead" projects are the development of camp sites and other recreational facilities for an increased tourist flow centering around World’s Fair visitors.

With expert advice and assistance from college committees, organization and direction from county extension workers, and the cooperation of local bankers, merchants, and other citizens, there is little a community can’t accomplish. Rural development organizations can’t give ready-made solutions, however. They can only show local citizens how to help themselves. With RAD-RRD support and guidance, New Yorkers are helping themselves toward a more prosperous future.
ELECTIONS for the coming
year were held by College of Agri-
culture alumni on March 25, 1964,
at a luncheon in Willard Strait-
Hall. Dr. Charles E. Palm, dean of
the College of Agriculture, gave the
main address and brought the
alumni up to date on local agricul-
tural developments.

Elected for the 1964-1965 year
were: Donald C. Whiteman '39,
Adams, N.Y., president; Robert
H. Eberitt '34, Schenectady, N.Y.,
1st vice president; Francis R. Sears
'31, Cortland, N.Y., 2nd vice pre-
dent; and Norman J. Smith '49,
Mineola, N.Y., 3rd vice president.

Dr. Stanley W. Warren '27, Ith-
aca, N.Y., was re-elected secretary-
treasurer.

Robert G. Greig '36, Red Hook,
N.Y., was elected to the executive
committee, after having served as
president in 1963-1964. Re-elected
to the executive committee were:
Donald G. Robinson '41, Castile,
N.Y., and Nelson F. Hopper '39,
Penfield, N.Y.

Donald C. Whiteman gave a re-
view of the Alumni Association's
activities.

Alumni Activities include work-
ing with students interested in com-
ing to Cornell. The College of Agri-
culture and their alumni hold a fall
Open House so that students can
visit the University. Last fall, 160
high school students visited the
Cornell campus.

Another activity is the annual
presentation of Alumni Prizes. The
Prizes are awarded to the junior
with the highest cumulative average
at the end of his sophomore year
and to the senior with the highest
cumulative average at the end of
his junior year.

An alumni breakfast is also held
during the reunion week in June.

A NEW METHOD of control-
ling cattle grubs and other parasites
is being researched by scientists at
the New York State College of Ag-
riculture.

Professors John Matthysses, ento-
ology dept., and John Miller, ani-
mal husbandry dept., are conduc-
ting experiments to determine how
the new drugs can be used for para-
site control and still be safe for ani-
mal's.

The drugs are systemic, as they
are sprayed on an animal and
absorbed by the body. They are
taken through the bloodstream and
control of both internal and external pests
results.

Cattle must be healthy when
treated with these systemic drugs
and there can be toxic side effects
if the treatment is given in cold
weather.

James A. Perkins, president of
Cornell, recently announced that a
Latin American Year ('65-'66),
program will be held at the Uni-
versity to illustrate Cornell's deep
involvement in Central and South
America. President Perkins said,
"A young generation is on the move
in the hemisphere. Our program in-
tends to introduce some of the out-
standing intellectual and artistic
leaders and achievements of Latin
America so that together we may
examine the questions that unite us
as well as divide us."

CORNELL UNIVERSITY re-
cently celebrated 21 years of con-
tinuous programming for educa-
tional television.

The first program took place in
1943 and today the Cornell Extens-
ion telecasts reach about two mil-
ion viewers on a regular basis.

Over the 21 year period many ad-
justments and improvements have
been made in program preparation.
Recently, a giant step forward was
taken when a T.V. Film Center was
established by the N.Y. State Col-
leges of Agriculture and Home Eco-
nomics. The purpose of this new
University facility is to produce ed-
ucational films for television.
The Alumni Breakfast for the College of Agriculture will be held June 20 at 8 a.m. in Willard Straight hall. $1.50 per person.

STANLEY S. GREENE, '15, 134 Genesee Street, New Hartford, N.Y., was an instructor in farm mechanics and agricultural engineering from '17 to '21 at the Cobleskill Technical Institute, Cobleskill, New York. Then he was a professor of agricultural education at Mississippi State College until 1935. From 1935 to 1957 he worked for U. S. Dept. of Agriculture as an extension agent, district conservationist, and as a flood control party chief in Pennsylvania and New York. He is now retired but still does sales work and substitute teaching.

COLONEL L. BROWN, '19, 472 Gramatan Avenue, Mount Vernon, N.Y., was class secretary of that year. After graduation he worked for the U.S.D.A. from '20 until '24. Since then he has been a free lance writer, specializing in fruit, vegetable, and market news. He operated a publishing company until 15 years ago, and since then has been editor for one company, and writer for another. He is also presently publishing a weekly on fruits and vegetables.

DUDLEY R. MERRILL, '20, 105 Hewlett Avenue, East Patchogue, N.Y., began a varied career by teaching in a one room school after graduation. He was a civilian automotive technician for the U. S. Army during the war years, and retired in 1961 as Public Relations Director and Operations Manager for National Propane Corp. One of his retirement projects was to see the United States with a 10,000 mile auto trip.

NATHANIEL A. TALMADGE, SR., '22, 36 Sound Avenue, Riverhead, New York, has been a partner in H. R. Talmadge & Son since graduation. His sons, John (farm manager) and Nat, Jr., are also partners in the business, whose products are potatoes, cauliflower, daffodils, and greenhouse tomatoes. Mr. Talmadge has been active in Grange and extension work. He is also director of the National Potato Council and trustee for the N.Y. 4-H Club Foundation.

JAMES F. HUXTABLE '37, West Winfield, N.Y., has been teaching vocational agriculture at West Winfield High School. Jim owns and operates a 650 acre dairy farm just outside West Winfield. He recently entered the Republican primary race for State Assemblyman. His daughter, Nancy, is presently a freshman in the College of Home Economics at Cornell. Another daughter, Susan, is a sophomore at the University of Vermont.

FREDERICK D. MORRIS, '37, RD 3, Cuba, N.Y., has taught agriculture at Rushford Central School since graduation. In 1956 he established a holstein herd on 180 acres. The herd, including 31 milking cows, was recently sold to his son, but Mr. Morris still lives on the farm. He plans to retire from teaching in 1970.

STEPHEN H. HUBBELL '38, Mohawk, N.Y., is presently teaching vocational agriculture. He owns and operates a large nursery as a hobby. Steve is active in local agricultural affairs. His daughter, Nancy, is a Junior at Mohawk Central.

ANDREW B. NICHOLS, '40, Ft. Leavenworth, Kansas has worked for the U. S. Army since graduation as a bomb disposal officer, paratrooper, and ordinance officer in Austria, Germany, Korea and Japan. He is presently working at the Combined Arms Agency, Combat Development Command and is preparing studies on doctrine, organizations, weapons and the Army's role in the future.

KATHERINE E. BARNES, '41, 1006 Mitchell St., RD 2, Ithaca, New York worked for the Farmers Home Administration and the Farm Security Administration for one year after her graduation. Afterwards she was employed by the Connecticut Artificial Breeding Association and later the N. Y. Artificial Breeders' Cooperative. She is presently associated with the Department of Extension Teaching and Information at Cornell.

WALTER G. BRUSKA '50, Springfield, Mass., was appointed Vice-President of Springfield College this past fall. Walt served as Director of University Development at Cornell since 1958. During his undergraduate years, he started on the varsity football team as an end. Walt majored in Education and was a member of a number of Ag campus activities. He has three children, Charlotte, Nancy and Walter, Jr. ("Biffer").
GLF Unico Emulsolin is the paint that does the work of two for the price of one.

Like old favorite oil base paints, new Emulsolin is deeply penetrating. One coat over any repaintable or chalky surface dries to a durable, flat finish... without a primer. And it chalks slowly to give your work extra years of fresh appearance. But that's just half of the story.

Like the new latex paints, Emulsolin is easy to apply. It dries quickly. Doesn't leave any dust, brush or lap marks. Resists blisters. Goes over damp surfaces. Tools and brushes clean up with soap and water. There's even more.

Because it is water-reducible, Emulsolin can be applied early in the morning and late in the afternoon without damage caused by dew. Your painting day is extended about 30 percent. If you want to paint right after a rain... go ahead—with Emulsolin.

Brush it on, roll it on, or spray it on—you'll get a handsome, durable finish with one coat. For houses, barns, silos, fences, or finish coats over iron, steel, aluminum, brick, stucco, concrete and stone surfaces. Choose from 280 decorator colors.

Priced below latex paints and about the same as our famous Weather-amic #251. You get a professional job at a do-it-yourself price.

Without a doubt, Emulsolin is the new No. 1 house paint. And you can get it from an old friend—your GLF. Stop by today. Cooperative GLF Exchange, Inc., Ithaca, N.Y.

**QUALITY CONSUMER PRODUCTS**
CORNELL COUNTRYMAN

Vol. LXII October, 1964 No. 1

IN THIS ISSUE

Editorial .................................................. 1
People on the Move ........................................ 2
Cross Country on 43 Dollars ............................... 4
Evolutionary Biology is Approved Graduate Program .... 5
A Look at the Past and the Future ......................... 6
An Experiment that Paid Off ................................ 8
Argentine Correspondent .................................. 9
Sand Box Subjects ........................................ 10
A Cure for Freshman Bustoutitis ........................... 11
Countryman Capsules ...................................... 12
Alumni ...................................................... 13

Staff

Editor-in-Chief ............................................ Susan Isler '65
Managing Editors ......................... Owen Wavrinek '65 and Renate Rabeler '65
Circulation Manager .............................. John P. Lowens '65
Librarian .................................................. Kenneth S. Balmas '65

Sophomores: Marjorie Case and Donald G. Semmler.

Cover: By George Lavris, Extension Teaching and Information.

STATEMENT

STATEMENT REQUIRED BY THE ACT OF OCTOBER 31, 1962: SECTION 4069. TITLE 39, UNITED STATES CODE SHOWING OWNERSHIP, MANAGEMENT, AND CIRCULATION OF THE CORNELL COUNTRYMAN, a magazine published monthly, October through May, at 490 Roberts Hall, Cornell University, Ithaca, New York. The CORNELL COUNTRYMAN is owned, published and distributed by the New York State College of Agriculture, a Contract College of the State University, Cornell University, Ithaca, New York. The magazine has a different editor each month because it serves as a teaching laboratory device for agricultural journalism majors in the College. The average number of copies sent each issue during the preceding 12 months was 3,000:

1) 1,600 of these are paid subscriptions sent to members of the College Alumni by mail.
2) 1,000 are sent by mail as complimentary copies to high school libraries in New York State.
3) The remainder are free distribution on the campus of Cornell University, Ithaca, New York.
I certify that the statements made by me above are correct and complete.
Signed: Charles J. Russell
Adviser

Printing by Norton Printing Co. of Ithaca. Subscription rate is $1.75 a year or two years for $3.25; three years for $4.50; single copies, 25 cents. A member of Agriculture College Magazines Associated.
EDITORIAL

With this issue of the Cornell Countryman we mark the beginning of our second year as a laboratory. Our staff is composed entirely of majors in the Department of Extension Teaching, better known as Journalism. Each of us is working to fulfill our practice credits required by the College of Agriculture for graduation.

The Countryman project, although unique in several ways, is a good representative of the College’s practice requirement program. The program’s raison d’être is to insure that graduates have practical experience in their professional area before they are graduated.

Like many other students, I was sceptical of the need for practice requirements. There were and still are many complaints from students regarding the program. The basis of these complaints, however, is not the theory behind the program, but rather the practical application of the theory to the student.

Number one on the list of problems, and perhaps the biggest stumbling block, is the fact that it is getting increasingly difficult to get a summer job. With many more applicants than openings, neither big companies nor small businesses have strong competition for summer personnel.

A second setback is that employers are often reluctant to give their summer students anything more than routine office work relieving the regular staff’s work load. As a result, a student working for a firm in his field may not be able to fulfill his requirements because he isn’t allowed to do anything in that firm to gain acceptable credits.

Lastly, a more practical problem often reported by those students who have completed their practice requirements is that you will not draw a large salary. This is an important consideration if you are financing your own education.

I am, of course, happy to report that these problems have been solved for the journalism majors in the College of Agriculture. As I said before, the Countryman project is unique. Its most obvious advantage is that it allows us to work off our practice credits during the school year, leaving our summers free. But more important, each of us gains practical experience that would be unavailable to us anywhere else. Every member of the staff will have worked at both the smallest task of filing papers to the more difficult one (and sometimes almost impossible one) of editor-in-chief before he is graduated. And just watching this magazine grow from a few ideas to a published issue is an education in itself.

We are confident, as each issue progresses, that the Countryman’s program is indeed worthwhile. We also feel that we have been successful in integrating our course work and practice requirements. With one year behind us, we offer the Countryman’s program as an example to other departments. Of course, not every field of study can be geared to a program such as ours, but it is possible that there are several that would profit.

Our work on the Cornell Countryman staff benefits us now as students, and will help us later as journalists. It is important to have not only professional interest, but also experience and understanding. The College of Agriculture’s practice requirement is one way to assure that its students have both knowledge and experience.
Cornell Outing Club
People on the Move
by Michael Whittier '65

Late one Friday afternoon a car pulls up to the Japes on the Cornell campus. Several students disembark, run into the lodge, and begin to carry strange looking equipment back to their car. They load it up, jump in, and drive off.

Chances are another group of Cornell Outing Club members have left town for the weekend to enjoy their favorite outdoor activity. Club members have many interests, ranging from exploring the heights by mountaineering to probing the depths by caving.

Elean Benjamin, President of the club in 1963-64 and 1964-65 says, "The Outing Club is open to every Cornell student. After going on a trip or two, a beginner knows whether he wants to become a member or not."

Soon after school starts in the fall, the backpacking hikes begin. Most hiking is done on local trails. Often sleeping bags, to be used for overnight camping, are carried on a packboard. Beginners can rent sleeping bags from the club for 25 cents a night.

Another favorite sport is rock climbing. "We hold practice sessions for beginning climbers before the trips," Elean Benjamin said. The novices learn the fundamental knots and climbing techniques here in Ithaca. The 75 feet gorge they practice in gives them a taste of the real thing. Then if an emergency arises on an actual trip, the beginners have some idea of what to do.

Generally, Outing Club rock climbers motor down to the Catskills, where the Schwangunks (popularly known as the Gunks) are located. These cliffs provide challenges for experts as well as novices.

Carabiners, pitons, and ropes soon become a familiar sight to rock climbing enthusiasts. All such equipment is owned by the Cornell Outing Club, and an active member can sign it out for his own use.

About ten English bikes are parked in Japes Lodge. Cycling is popular during the fall and spring, and often all day excursions are taken. In fact, each year some club members make the 100 mile trip around Cayuga Lake. Their reward is plenty of fresh air and beautiful scenery.

Fall soon passes and the icy blasts of winter move into the Ithaca area. The Outing Club then shifts its attention to such sports as winter mountaineering, ice climbing, and cross-country skiing.
For winter mountaineering almost any hill will do, but club members usually travel to the White Mountains or the Adirondacks. On these trips, winter sleeping bags and very warm clothing are needed because temperatures often dip into the \(-20^\circ\) range at night. “Winter mountaineers often camp on the slopes, and because of very high winds, they need a shelter,” Miss Benjamin pointed out. If a lean-to isn’t available, they pitch a tent for protection against the bitter wind.

Snowshoeing is an important part of winter mountaineering. It’s surprising how awkward snowshoes feel at first, the novice is always banging one against the other, and tripping. Crampons are put on the boots to get traction, and help mountaineers negotiate icy slopes.

Nearly every Sunday during the winter an ice climbing excursion to one of the local gorges takes place. Ice forms where the water flows into a gorge. Using crampons and ice picks, adventuresome students slowly “pick” their way to the top of the steep ice walls created by Old Man Winter.

A third wintertime sport is cross-country skiing. Interested students find plenty of suitable terrain near Ithaca for this type of skiing. Usually these enthusiasts furnish their own skis.

When spring rolls around again, the canoeists begin to get restless. Out comes the canoes for inspection, and if needed, repair. After practice sessions, trips are taken to the Connecticut River for white water canoeing. The local lakes provide fine still water for canoeing.

Certain members of the Outing Club enjoy an entirely different kind of adventure. They live and breathe for cave exploring (or spelunking as it’s commonly called). Every few weeks trips leave for Schoharie County, near Albany, where some of the largest caves in the Northeast are situated. Since many of the caves contain vertical pits, rope work is required.

People sometimes wonder what motivates a cave explorer. After all, most caves in the Northeast are cold, wet, muddy, and contain small difficult crawlways. It’s probably the strenuous physical exercise, a chance to see some beautiful cave formations, and the hope that he might find a previously unexplored passage that contribute to the caver’s love for spelunking.

Campus cave enthusiasts formed the Cornell Student Grotto last year. Its main goal is to promote scientific research in caves by studying biologic life, mapping, and encouraging cave exploration, conservation, and safety.

“Anyone wishing to try any of these sports can come to the Cornell Outing Club meetings Wednesday nights at 7:30 p.m. at Japes Lodge,” said Miss Benjamin. “After three trips and an ‘overnight’, beginners are eligible for membership.”

Free mountain climbing to cave exploring, from canoeing to cycling, Cornell Outing Club members break the monotony of studying by getting physical exercise. It’s an ideal organization for those who enjoy the outdoors.
Budget Tour
Cross Country
on
43 Dollars

Across the country in eight days on $43. Sounds unbelievable, but if you really want to see the U.S.A. and want to meet some interesting people, that’s all it takes.

Both Bill and I were on our way to Alaska for summer jobs, and Gary was going to do some fire-fighting in Idaho. We had been to Alaska before, but this time we planned to make a leisurely cross-country trip—on as little money as possible.

One of the best suggestions I have for saving money on such trips is a tip on finding a room. Tourists who go to Europe often return with stories of how much more friendly the Europeans are to strangers than we Americans are. This may be the case, but perhaps many hospitable situations are overlooked in this country.

During the summer months, summer sessions are found at practically all American colleges. And since the dormitories are usually open for students, there are always some vacant rooms. I have traveled across the country three times during the summer, and I have yet to be refused a free night’s lodging in a college dormitory. The operation is simple enough. You go to a dorm and look for some students with whom you think you would get along, tell them your situation and they will always be of some help. Either they will introduce you to the director as their guest, or just show you a vacant room. I have stayed at about fifteen different colleges this way. There is no linen on the bed, but you have a bed, a shower, and a roof over your head—all for free. In addition to saving money, you get to meet people from everywhere, and you often are surprised. Not only are other college students sympathetic to your cause, but others also display an often overlooked hospitality.

I suspected that the long drive in the sun would be hard on the eyes, so I purchased a bottle of commercially famous eye drops, and began to use them. By the second day of the trip I was thankful to have taken such precaution for my eyes were red and painful. I used the drops more and more frequently, but my eyes grew steadily worse. When my eyeball began to peel, I got scared. I had hoped to make it to Spokane where I knew people who could suggest a good doctor. Then I decided to get attention in Billings, but by the third day it was evident that I needed immediate care. Well, here goes the inexpensive trip I thought.

We stopped at a drug store in Canton, S.D., and asked if any of the doctors were having office hours. It was about six p.m. The druggist said no, but that perhaps he could reach one who had not yet left. After one phone call I was given instructions on how to find a doctor who was going to remain in his office for me.

During his examination we had a pleasant chat, and I learned that I was allergic to the commercial eye drops. He gave me a prescription from his desk. When I asked how much I owed him he replied, "Nothing." He learned that I planned to go on to medical school, so he laughingly said that he couldn’t charge another member of the profession.

The westward journey continued. Our longest day of travel was the trip between Billings and Butte. We left Billings early in the morning, and headed for Yellowstone National Park. There we spent the day looking around, and fishing in the warm streams fed by geysers and hot springs. The park held our interest, and it was nearly 10:30 p.m. before we left and headed north to Butte.

The population in the area was sparse, but we did find an open diner in a small town at the northwest gate to the park. Here while waiting for our order we asked where we could find the nearest gas station. We learned that all the stations between there and Bozeman (150 miles) were closed. The waitress became very concerned when she heard that we had planned on driving all the way to Butte at such a late hour and over narrow and unfamiliar roads. Well, we were nearly out of gas, so obviously we were in trouble. On the next trip to the table she informed me that she had called her husband, and that we could siphon out what gas they had. In the middle of a strange place, you hardly expect much genuine concern. Word had spread through the diner, and the waitress came to tell us that one of the stations down the street would open up for us. When we left, I think for the first time I really wanted to leave a tip.

In total the trip cost each of us $43.00. It was a great trip, and it proved that a little human interest is richly rewarded.
Evolutionary Biology is
Approved Graduate Program

by Renate Rabeler '65

Although seminars in evolutionary biology have been available for interested Cornell graduate students in the past, no organized program of study was available previous to this year.

The evolutionary biology program is a result of the continuous drive for a stronger more unified study in the field of biological sciences at Cornell. In the past a student could seek courses or seminars in evolution in various departments of the New York State College of Agriculture and in the zoology department in the College of Arts and Sciences. However, the students pursuing the study of evolutionary biology suffered since there was no one unified administration to give counseling and aid in selecting the desired courses.

The study of evolutionary biology is now an approved program for a major student for a Master's degree and a Ph.D. It can also be used as a minor subject when the major is in another related field.

Students who select evolutionary biology as a major or minor, study the outline of either general biology or a specific phase of biology with emphasis on the theory of evolution. Depending upon his interests, each student has a choice of doing research with recent organisms or with the paleontological record.

To insure accurate supervision in the field, the evolutionary biology student has a committee of advisors. These advisors are chosen from the program's faculty. One of the members of the committee is usually a specialist in the student's particular area—either the botanical or zoological field. Through this process the student can not only seek general advice on evolution but also on how it pertains to his particular study.

The faculty for the evolutionary biology program is comprised of fourteen professors, three of whom are in the College of Arts and Sciences. Each professor has a direct influence on the decision of which students are accepted into the program. Every professor who would be teaching the student, or would be having the student under direct supervision, evaluates the application and approves it if he feels that he has time to work with the student.

Professor Uhler, the field representative for biology, is the coordinator between the departments. He connects the graduate student with the specialist under whom the student will be working.

Since this year is the first year of the program's existence, the quota of students to be registered in evolutionary biology is six. Applicants have come from all areas in the nation; most of them applying for evolutionary biology in the study of behavior.

The program has great potential to become a body of concentrated knowledge. However, it is uncertain what will happen when the study of the biological sciences will be given in one unified department or college. Professor Uhler, however, speculates that the program will expand and set precedents for other programs offered in biology at Cornell.
The Centennial Celebration of Cornell University's founding begins Friday, October 9. At 10:30 a.m., dignitaries representing "the world's foremost institutions of higher education" will assemble on the Arts and Sciences Quadrangle in caps and gowns. The academic procession will go to Barton Hall, where the Centennial's Opening Convocation will be held at 11:00. Classes will be cancelled to permit student attendance.

Following the Invocation given by Reverend Paul L. Jaquith, University President James A. Perkins will deliver an opening address. After the address by President Perkins, the Cornell University Chorus and Glee Club, under the direction of Professor Thomas A. Sokol, will present "Festive Ode for an Academic Occasion", specially composed by Karel Husa, professor of music. Accompaniment will be provided by the Cornell Symphony Orchestra under the direction of Professor Husa. Theme for the Convocation and for all other Centennial programs is the mission of the university during the next 100 years. Sir Eric Ashby, Master of Clare College, Cambridge University, and President of the British Association for the Advancement of Science, will be the first prominent guest to participate in the Centennial events. Sir Eric will be the principle Opening Convocation speaker.

Lunch for visiting dignitaries and other guests will be served in the Memorial Room of Willard Straight Hall and in the Statler Inn Ballroom. Afternoon tours of the campus will be given by student guides.

In the evening, a reception for guests of President Perkins will be held in the Statler Ballroom. A dinner in Barton Hall with U.N. Ambassador Adlai Stevenson as speaker will close the day's events.

An international student conference, the second of five major Centennial events, is scheduled to begin on Wednesday, February 24, 1965. About 100 foreign student leaders are expected to participate with members of the class of '65 in discussing "Access to Higher Education in the Future and Its Importance for the Political and Economic Growth of the Various Countries of the World."

Delegates will be officially welcomed by President Perkins at a dinner meeting Wednesday night. Following the dinner, guests will hear the conference's keynote address delivered by Cyril James. An open house for all delegates and their hosts is planned for 9:30 p.m.

On Thursday morning, delegates will attend classes with their hosts, meet professors, and have a chance to enjoy a dead hour in the Ivy Room of Willard Straight Hall. After campus tours and lunch in University living units, the first discussion group will meet to investigate "What is the Purpose of a University Education and How Does Your University Meet This Responsibility?"

A second discussion, "To Whom Should a University Education Be Available?" will be held after dinner. The Sherwoods, Cayuga's Waiters, and the Notables will entertain conference at 10:00 p.m.
“What is the Role of the Student Inside and Outside the University?” is the discussion topic that will open Friday’s program. At noon, 200 people will be invited to lunch at which the second major address will be given.

After dinner in faculty homes, delegates and Cornell students will be invited to attend the Cornell Dramatic Club production or the Cornell vs. Brown hockey game.

Saturday morning classes may be cancelled to allow campus participation in a panel discussion at which delegates and Cornell student officials will present résumés and answer questions about the conference. A final discussion, “Future Implications of the Conference”, in the afternoon followed by the Heptagonals in Barton Hall at 7:00 p.m. will complete the day’s schedule.

Lady Barbara Ward Jackson will close the international student conference on Sunday, February 28.

Cornell alumni living in New York will have a front row seat for the third Centennial event. Emphasizing the University’s role in developing the performing arts, this program scheduled for the second week in March will feature the opening of two exhibits: the Cornell Wordsworth Collection at Morgan Library and “Cornell as it was, as it is, and as it will be” at Lincoln Center; concerts at the New York State Theater by the Cornell Orchestra, Chorus, Glee Club, a symposium discussing the relationship of the university and the performing arts, and a concert by the New York Philharmonic Orchestra with Leonard Bernstein conducting in Philharmonic Hall.

A Centennial Dinner for selected famous artists and Cornell University and Lincoln Center Trustees will conclude the week.

The charter for Cornell University was granted by the State of New York on April 27, 1865. The 100th anniversary of the charter’s grant will begin the fourth Centennial event. The five-day program will include a conference entitled “The Great Problem—A Program for Investigation” on the future of physical and biological sciences, the social sciences, and the humanities. Other planned features of Charter Week are two performances by the Philadelphia Orchestra with Eugene Ormandy conducting in Bailey Hall.

Cornell’s Centennial Celebration will end with Alumni Reunion Week, following the graduation of the Centennial class. Special events planned for alumni are still in the planning stage.

The Centennial program was planned by a committee headed by George H. Healey, professor of English and University Curator of Rare Books. Assisting Healey were two vice-chairmen, Felix Reichmann, director of technical services of the University Libraries, and Robert A. Kidder, assistant to the President for Development and University Relations. Student members of the committee are Martin S. Baker (New York City), J. Murfree Butler (Lima, Peru), and Carolyn E. Press (Park Ridge, Ill.), all class of ’65.
It is widely recognized in academic circles that an important aspect of the college experience is the daily associations and contacts made. Because meeting and talking with people is largely a function of our routine habits of eating and lodging, our choice of where and how we live while attending classes becomes much more than a mere satisfaction of our physical wants. Most studies on the subject say that an undergraduate's outlook and attitudes will be greatly changed during those four years of study—much of this alteration will stem from the acquaintances and friends he has made. For this reason the student will want to make an intelligent decision when he chooses his living situation; social and intellectual growth are important, but often finances become an even greater factor. All of these must be considered.

Small group living units are the most desirable mode of living for the college student says the Housing Committee which President Perkins appointed to study the problem of campus living. Another indication of the popularity of this kind of living is evidenced by the large percentage of freshman men (87%) who participate in the annual Inter-Fraternity Council (IFC) Rushing Program. Almost half of the Cornell undergrads have joined fraternities or sororities in the last three years. Living in these Greek houses is to be contrasted with dorms on one side of the spectrum and rooming houses on the other. The former allows the individual to become lost in a maze of people and activity and the latter isolates the student from the campus. The obvious advantages to small group living is that it allows one to merge with some likeminded people and still be assured of enough diversity to expose him to other interests and personalities. However there are other small group living units on campus which provide these same advantages without imposing a large budget on a small budget student, for the one drawback of small living groups is that the price goes up.

Von Cramm Scholarship Residence Association is perhaps the most successful of these houses. Built in 1956, the house was financed by a German estate which shifted its assets to an American fund when the Nazis took over that country. Thomas Gilchrist, trustee of the von Cramm estate and Cornell alumnus, combined with Deane W. Malott, former Cornell president, in providing the $125,000 building for “deserving young men with deep academic commitment”.

Now seven years old, the house of Cramm has had an exciting history of experimentation where economical, small group living has existed. A consistently high scholastic ranking, campus and house speaker program sponsorship, a vigorous sports program, and a resident professor are some of the features of this non-Greek house. In addition, von Cramm participates in all the major weekends of the year, and a number of smaller parties during each semester. Membership is based on “intellectual promise” rather than grades though there is a minimum average of 75% in order to qualify. The family atmosphere at the house is mostly a result of the boys doing their own cooking and cleaning. For this reason von Cramm is rightly classified as a Co-op. As one member put it, “this kind of living where each of us must do his part to make the house function, is much more realistic of life.” The average cost of living at von Cramm is about 30% cheaper than living at the average fraternity.

Von Cramm, though barely out of the infant stage itself, finds itself in the role of parent. There now exists two living units for girls which have been patterned after von Cramm’s example. Mr. Milton Shaw, director of Cornell’s Housing and Dining and on Von Cramm’s advisory board, calls the residence association “an experiment that paid off.” Because von Cramm has been successful the Girls’ Co-op at Trihammer was established last year, and this year Phillips House will be the newest addition to the young family of University sponsored cooperatives. The Trihammer Co-op has emphasized economy rather than social academic advancement, and in this it has succeeded quite well. In its first year of operation the resident girls have spent less than one-half of what would have been spent in the dorms. Their relationship with the University is something like a landlord-tenant one.

Phillips House is still somewhat on the drawing board. Dining arrangements will differ from Trihammer in that the girls will not prepare their own meals, but reduced spending will be a major consideration. The building is the former Chi Omega house. Mrs. Emma Phillips has been instrumental in providing these facilities for the University.

These three houses, in addition to a few other private enterprises of the same nature, have different philosophies and a varying degree of autonomy from University control and supervision. Each of them, however, helps to provide a home away from home for those students who are interested in small unit living with decreased spending. Each of them increases the variety of this campus and continues Ezra Cornell’s tradition of an institution for everyone.
(The following is a letter from exchange student, Wayne M. Pulver, upon his arrival at the University of Buenos Aires, Facultad de Agronomía y Veterinaria. Ed.)

Dear Professor Hertel,

I have now been in Argentina for ten days and I'm enjoying it very much. Arriving at the Buenos Aires airport early on the morning of July 8, I was met by John Welsh and Alfredo Langue, who had braved both the early hour and the cold weather. I spent the day with John, seeing the university (Facultad), meeting people, opening a bank account, etc. John has made a fine record here in Argentina as seen by his many friends, knowledge of the language, course-work, and countless experiences. I cannot thank him enough for the help he has given me thus far and I only hope that I can do half as well in the coming year.

After spending the night with John, I took a bus early in the morning for Canals, in the interior, to spend some time at one of the Firpo brother's estancias. A quarter of the trip seemed like it was in the city. Buenos Aires is a very large flat city with few buildings over two or three stories high. Being a country boy, it will take me some time to find my way around, I'm sure.

Speeding over the pampas, much like our flat Midwest, it was soon evident why, for the most part, Argentina is crop and cattle country. The soil is rich and very tillable with not a rock to be found anywhere. Grazing is year-round with vast herds out on the range even now, though we are in the dead of winter. While it may be freezing in the morning, by noon 60° F. may often be reached. A little rain is the only thing wanting to make the country even more green than it is.

"La Danesa", one of the best known estancias in Argentina, is where I've been for the last nine days. It is about 300 miles from Buenos Aires and in the middle of the pampas. While it is the smallest of the Firpo estancias, being only 5000 acres, it owes its fame to the show cattle it produces; most of these being Angus bulls, of unsurpassed quality. When I arrived about twenty bulls, out of the over 400 present, were being prepared for the "Exposición Rural" in Buenos Aires. Since it is the off-season here and there being plenty of man-power about, I wasn't able to help out as much as I may have wanted to. I was able to pick up some farm vocabulary, however.

The Firpos are wonderful hosts and have given me every comfort and help possible. Since they speak only English to me, I have to practice my little Spanish with the workers and servants. Even though I have a very long way to go before I'll be able to carry on a conversation of any length, or understand one for that matter, I am now able to get along with some small-talk of a kind. In spare moments I study from my Spanish book and read Spanish magazines to pick up anything that is possible.

While "Voice of America" had been my only contact with the States, I had another exceptional one last week. The president of the U.S. Aberdeen Angus Association flew in for a day with his public relations man. Since Senor Raul had to see to the shipping of the bulls to the show and his son was away, my day's work was spent escorting these gentlemen, in one of the Senor's planes, around to several of the Firpo estancias. Needless to say, it is this kind of work I enjoy the most and typical of what I've been up to these last few days in the country.

I will spend one more day here at "La Danesa" and then go back to Buenos Aires to get settled in my room and take in the "Exposición". After that I'll spend another week in the country at a different estancia and then prepare to start classes around the 10th of August.

My address is as follows:

AVDA. San Martin 4476
Buenos Aires
Argentina

Please excuse this typing. John told me a typewriter was hard to come by, so when I found one at "La Danesa" I was quite pleased. It took me only two hours and a little luck to put this ancient Swiss machine in a kind of working condition and now I need stop only every few lines to put it that way again.

Sincerely,
Wayne M. Pulver

Wayne M. Pulver
Sand Box

Subjects

by Stephanie Thompson ‘64

Psychology 101 students here at Cornell are traditionally human “guinea pigs” for psychological research. This fact is well known and accepted by most students taking elementary psychology. Usually, as collegiates, we are secure enough not to fear any imagined traumas caused by a scientific tinkering with our psyches. But how would such an “army volunteer” method of choosing subjects be seen by young children? Are there effects on a three year old child who becomes a “psychological” subject? The answer to this question can be found quite readily if you will merely observe the children in the nursery school at the College of Home Economics, located in Martha Van Rensselaer Hall.

The children are usually aware of being subjects and of being observed when they are outdoors playing. While outside, they talk to the adults studying them. One little boy whom I had been following all morning, jotting down some notes, told me jokingly after a few hours that I should stop looking at him and go back to my paper. Others have asked me my name and what I was doing. Of great interest to many of the children is the question “Are you watching me?” However, even outdoors, they are unbothered by the observers and more interested in their games than the strange adults.

When indoors, the children are observed by people hidden behind one-way screens surrounding the nursery school rooms. It is not uncommon for a hidden observer to hear a child talk to another child about any of the adults who have used them as subjects. I heard one child point out a particular adult by saying, “I played with her yesterday. She’s okay!” Playing is how the experiments are described to the child. He is asked to go downstairs with the adult to play a “kind of a game.” In this way, the child doesn’t feel that he is doing something unpleasant. And, of course, should he not feel like “playing,” he does not go.

An important thing to remember is that a very small part of the child’s time in the nursery school is being spent as an aware subject. Only when they are taken to the experimental rooms are they really con-
A Cure For
Freshman Bustoutitis

by Cathy Johanson '65

Have you caught it yet? Freshman bustoutitis—incubation period two weeks to one month—usually becomes rampant by the first round of prelims. If you are a victim and feel that the only way to stay in school is to study from morn until midnight, go ahead. Your prelim marks will probably be surprisingly high. So relax. Pull your head out of the books once in a while and look at all the other ways to spend your time. The time you spend away from your books is not wasted; it may be just as educational in a different way.

Books can’t effectively teach how to get along with people, how to lead a discussion, how to plan a dance, or how to engage a world-famous speaker. Extracurricular organizations can and do enable their members to learn these and other valuable skills.

At Cornell there are clubs ranging in subject from agronomy to zoology, from chess to yachting, and from cricket to computers. No matter what you are interested in, there is either an organization devoted to that specific area already, or there are enough other interested students that you can form your own club.

Among all the campus student organizations, the student governing bodies exert the most influence and are often the most rewarding to work for. Dormitory councils, class committees, and Willard Straight committees are important branches of the student government which may serve, also, as training grounds for higher positions in the Executive Board, Women’s Student Government Association (WSGA), or in one of the college councils. Your duties may range in excitement from typing the minutes of the last meeting, to escorting a renowned man, such as Walter Reuther, from his plane to the campus and arranging a news conference for him.

If you are politically inclined, you can take your choice and be a Young Republican or a Young Democrat, a member of the Cornell Conservative Club or the Liberal Union. If you are more interested in the worldwide picture, the One World Club offers a good chance to meet students from other countries and hear prominent speakers.

Participation in a club organized around your major subject is a useful and interesting experience. Whether it is the Pre-Vet Club, the Undergraduate Physics Club, or one of the many others, you will benefit by meeting your professors informally, by hearing speakers important in your field, and by getting acquainted with the upperclassmen in your major.

Religious organizations, particularly Cornell United Religious Work (CURW), play an important part in campus life. CURW sponsors many lectures and actively supports such varied causes as civil rights and better campus bookstores. Other general religious groups are active on campus, as well as many comprised of followers of specific denominations.

If your primary reason for joining a club is to socialize, or to meet others interested in your hobby, the Folk Song Club, the Saddle Club, the Model Railroad Club or one of the many others would be very enjoyable and entail a minimum of responsibility.

Most students who are active in campus activities agree that the training in handling responsibility is the most valuable result of their participation. Student service groups such as the 4-H Extension, Grange or Red Cross, musical or dramatic organizations, and campus publications all require a lot of work, but there is so much fun interspersed with it that nobody minds.

In a few weeks the annual Activities Fair will be held. There you can get a glimpse of what types of organizations are active on campus. Not all clubs have displays, so ask any upperclassman for information and watch the bulletin boards for meeting announcements.

Sometimes the academic pressure gets very intense, and it seems as if the world consists of books, term papers, and classrooms, but there is a lot more to Cornell than academics. Whether you are interested in conservation or Esperanto, debating or singing, or any of dozens of other subjects, there is an organization which would welcome you and your support.
The Guldin Award Committee has reviewed the spring term issues of the Cornell Countryman. The following awards were made:

Toni Gailey '65, won the top prize of $75 for her article, "RAD-RDD: A Face for the Future." It appeared in the May 1964 issue of the Countryman.

Conan Mooney '66, won the second place prize of $50 for his article, "CA STORAGE: Apples and Astronauts," which appeared in the February 1964 issue.


Four received honorable mention for their articles of general excellence. They were: Owen Wayrinek '65 and Peter Heilemann '66, co-authors of "Expansion—University Planning Includes Six New Buildings"; Robert Fistick '65, for "Song of a Coxswain"; and Renate Rabeler '65, for "Pollution—Nature Fights Back."

* * *

Dr. Robert L. Plaisted, a member of the faculty since 1956, became head of the plant breeding department as of September 1.

He succeeds Professor Rossy P. Murphy who has been named Dean of the University faculty after serving the past 11 years as the department leader.

For a 3-year period, 1956-59, Plaisted was assistant to the director of agricultural research programs at Cornell. He resigned this position in favor of devoting full time to a career of research and teaching.

Professor Plaisted is author of numerous research articles that have appeared in such publications as the American Potato Journal, American Society of Horticultural Science, and the National Horticulture Magazine.

He received a B.S. with distinction from Cornell in 1950, and both his M.S. and Ph.D. degrees from Iowa State University.

At the XVII International Horticultural Congress to be held at the University of Maryland in 1966, Seeley will be chairman of the commercial floriculture sessions.

* * *

Professor Malden C. Nesheim, a poultry nutritionist, received the American Feed Manufacturers Association Award for 1964 at the meeting of the Poultry Science Association held August 6th in Minneapolis.

The College of Agriculture professor was cited for his research contributions to improving the understanding of poultry nutrition.

His work has contributed to the basic knowledge of nutrition as well as poultry nutrition. One outstanding contribution, according to the citation, has been his discovery that the amino acid, arginine, requirement of chicks is directly related to genetic factors.

The poultry professor received both the B.S. and M.S. degrees from the University of Illinois and the Ph.D. degree from Cornell where he has been on the staff since 1959.

* * *

This year’s American Society of Animal Science Award in Animal Breeding and Genetics has been given to Professor Charles R. Henderson of the animal husbandry department.

Presentation of the award took place at the 56th annual meeting of the Society held in August at the University of Tennessee.

The honor went to Professor Henderson for his outstanding work in animal breeding and genetics. He is a developer of refined techniques for measuring genetic values of dairy cattle. He showed the importance of environmental factors in cattle fertility, and pioneered in stressing the importance of young sire-sampling programs in artificial insemination.

Professor Henderson received his B.S., M.S., and Ph.D. degrees from Iowa State University. He has been on the staff of the College of Agriculture since 1948.
KENNETH O. WARD '14, Candor, N.Y., has been in the farm and livestock business since he graduated. He has been President and on the Board of Directors of the Owego Kiwanis, served as President for nine years of the Candor School Board, and has served on the Board of Directors of the New York State Cattle Dealers Association.

J. C. CORWITH '16, Water Mill, L.I., N.Y., is currently farming in partnership with his sons. He formerly was an Appraiser for the Federal Land Bank at Springfield. He has been a member of the Board of Regents of New York State, a Director of Mohawk Airlines, a President of the G.L.F Exchange, and a Chairman of the Board of Farm Credit Banks.

FORREST B. WRIGHT '22, Riley-Robb Hall, Ithaca, N.Y., has been teaching, and doing research and extension work in Agricultural Engineering at Cornell since 1921. In 1958 he retired as Emeritus Professor. He has published two books, invented and patented an automatic egg washer, and is currently working on an International Project in Mexico.

MAURICE C. BOND, Ph.D. '28, 102 Roberts Hall, Ithaca, N.Y., received the U.S. Department of Agriculture Superior Service Award in 1957. He was a Professor of Marketing at Cornell's College of Agriculture from 1934-1954, and has done research work in agriculture. He has also worked for the Agricultural Adjustment Administration and the Puerto Rican Advisory Food Commission. He is currently serving as Consultant to the Farm and Home Development Program at the University of the Philippines.

VERNON E. CHURCH '34, 84 N. Highland Avenue, Nyack, N.Y., opened his own retail flower shop, Vernon Church Flowers, in 1950. Before that he worked for various florists, and was foreman for an electrical resistor manufacturer. He is a member of the New York Florists Club, and the Director of the Metropolitan Retail Florists Association. Also, Mr. Church has been Treasurer, Secretary, Vice-President, and President of the Rotary Club.

JOSEPH P. KING '36, 55 Country Club Drive, Rochester, N.Y., is currently working for the Genesee Valley Regional Market Authority. He is past President of the Agricultural College Alumni Association, is the Vice-President of the Cornell Club of Rochester, Treasurer of the Rochester chapter of the Public Relations Society of America, and Chairman of the Farm City Committee of the Rochester Chamber of Commerce.

HERBERT O. FAGHER '37, Box 247, Kingston, N.Y., has spent the past 27 years on the development, construction, operation, and maintenance of public and private properties. Presently he is working for the U.S. Government Public Housing Administration, maintaining and improving the grounds and structures for over 200 housing projects.

DONALD F. MEISTER '42, 46 Birdsell St, Greene, N.Y., is the past President of the Cornell Club of Chenango County. He is self-employed as the owner and manager of the Agricultural Consultant Service for Cooperatives, and Vice-President of the Farmers Health Agency, Inc. His wife, Marcia Colby Meister '44, is assistant 4-H Agent in Chenango County.

ROBERT H. FOOTE '47, (Ph.D. '50), 205 Morrison Hall, Ithaca, N.Y., has been a professor at Cornell since 1951. He has been the corresponding secretary of Phi Kappa Phi, a Fellow in the American Association for the Advancement of Sciences, and a member of the American Dairy Science Association and the American Society of Animal Science. In 1958-1959, Dr. Foote went to Denmark on a Fulbright Award.

GEORGE REINGOLD '48, 58-42 262 Street, Little Neck, N.Y., is a member of the Board of Governors of the Cornell Alumni Association of New York City, and is school chairman of its Secondary School Committee. He is currently employed as Customer Research District Chief of New York City for the Continental Can Company.

WILLIAM JAMES ASH '59, 1007 E. State Street, Ithaca, N.Y., was employed by the New York State College of Agriculture to work as a research geneticist in the University Duck Research Laboratory, Eastport, L.I., New York. He then transferred to Ithaca to give a course in Poultry Science and continue his research. Dr. Ash attended the XI International Genetics Congress at The Hague, Netherlands, where he presented a research paper on "Lethal Factors in the Duck".

WALTER J. G. CARPENTER '61, Department of Horticulture, Purdue University, Lafayette, Indiana, is now an Assistant in Horticulture at Purdue, and is working toward his Ph.D. He received his Master of Science from the University of Rhode Island in 1963.
Agriculture in the Empire State is an important, strong and vigorous enterprise. Its farmers produce a wide diversity of products on highly specialized farms. Its economic health and that of its allied industries is directly related to the prosperity and progress of New York State.

Total gross farm income reaches almost $1,000,000,000 a year. The state's farm real estate is valued at about $1,500,000,000. The value of livestock, machinery, feed, and supplies amounts to another $1,000,000,000—a total investment of $2,500,000,000 in New York farm businesses.

One-fourth as many farmers produce one-third more products on one-half as much land as in 1900. This remarkable success story clearly indicates that New York State has a progressive Agriculture.
November, 1964

- Seven new TV films tell a dynamic story
- Scholarship winners feted with barbecue
- The Crescent: symbol of Big Red football
Scholarship Winners Feted

by Peter Tukey '66

Members of Ho-Nun-De-Kah, senior men's agricultural honorary, returning to Cornell from active service in World War II, were desirous of serving the College of Agriculture to a greater extent. Out of this desire, in 1946, the annual Ho-Nun-De-Kah Barbecue was born.

This year's barbecue, held October 6, in the Judging Pavilion, was received by a large turnout of freshman aggies and upperclass scholarship holders.

The Dean of the College of Agriculture, Charles E. Palm, characterized the event as "...an affair to recognize outstanding scholastic achievement among our students and to welcome the new Cornellians in agriculture of the Class of '68."

First on the agenda was a dinner prepared and served by members of Ho-Nun-De-Kah. Entertainment was provided by the Kappa Kappa Gamma sorority singing group, the Kappa Keynotes. Carl Eisenhard, '65, served as Toastmaster. Bruce Hawley, '65, President of Ho-Nun-De-Kah, welcomed the students and introduced the speakers, Professor Thomas C. Watkins, Director of Resident Instruction, and Dean Palm.

Director Watkins focused his talk on the scholarship aid available to Cornell agriculture students. He noted that more than $857,000 in scholarships and financial aid was distributed among seventy-five to eighty per cent of the College of Agriculture's enrollment last year. This year the College of Agriculture gave out 197 separate awards, while the University presented 77. The aid comes from approximately eighty-five separate scholarship funds.

After announcing the new Robert N. Marshall Memorial Fund, Professor Watkins turned his attention toward the rest of the scholarship donors. He introduced each donor or donor representative present at the barbecue. Those present included:

- Mr. Francis Sears: The Alumni Association
- Mr. John Dyson: The Dyson Foundation
- Mr. Sydney Schwartz: The Eastern Frosted Foods Association
- Mr. John C. York: The Eastern Milk Producers Cooperative Assc., Inc.
- Mrs. Otto Langhams: The Federated Garden Clubs of New York State
- Mr. Parshall: The H. J. Heinz Company
- Mrs. Carl E. Ladd: The Carl E. Ladd Memorial Fund
- Mrs. R. N. Marshall: The Robert N. Marshall Memorial Fund
- Mr. John Porter: The National Plant Food Institute
- Mr. Merle Duke: The New York Lime Association
- Mr. Robert Thompson: The NOPCO Chemical Company
- Mr. Frank Thomas: The Ralston Purina Company
- Dr. Anson Pollard: The Leland Spencer Dairy Marketing Scholarship
- Mr. William Baldwin: The Ward W. Stevens Holstein Scholarship

The next speaker, Dean Palm, alluded to University President James Perkins' inaugural address by reminding his audience that learning, research, public service and, more recently, international agricultural development are the four basic dimensions of Cornell's responsibility. Dean Palm then spoke of Cornell's Philippine program. Begun in 1952, it was a joint effort with the College of Agriculture of the University of the Philippines to assist in the rehabilitation of that war-ravaged institution. Currently, Cornell, with the support of the Ford and Rockefeller Foundations, is aiding in the development of a graduate training program. An important part of this program is the exchange of Philippine and Cornell graduate students and faculty members.

Ho-Nun-De-Kah had its beginning in 1930 when two separate honors, Helios and Hebs-Sa, were welded into one. The name Ho-Nun-De-Kah, and the organization's ritual trace their origin back to Dr. Earl A. Bates' extension advisees, a group of American Indians.

The membership of Ho-Nun-De-Kah is comprised of male students in the senior class of the College of Agriculture. Selections are made on the basis of scholarship and leadership. In addition, provision has been made for female associate memberships.

Throughout the year, Ho-Nun-De-Kah serves other sectors of the agricultural school's student body and faculty. The Professor Merit Award, bestowed upon Daniel G. Sisler for the 1963-64 school year, is presented each year to one outstanding professor. In the selection of the recipient of this award, Ho-Nun-De-Kah co-operates with the Agriculture College Student Government and members of the senior class. Other programs sponsored by Ho-Nun-De-Kah, including the Student-Faculty Tea and the Senior-Faculty Reception held on Baccalaureate Sunday, provide opportunities for casual contact between the students and their professors.
Survival of the Fittest

by Kenneth Goldstein '64

"Six hundred and fifty strong we were, and green with the moss of obscurity. Hardly had we climbed the Hill ere we met the vicious foe. From afar we heard their awful yell and fearful rushed to meet them. Valiant struggle! 1903 was met and conquered. When the dust of battle had cleared away we found ourselves a shabby herd of trembling victors . . . The battle is over. Its strife and animosity are dead. But the great lesson we then learned has ever since been remembered: We went into that struggle 650 individuals with few interests in common—we came out of it a single unit henceforth to be known as the Class of 1904." (1904 Class Book.)

This is a far cry from the welcome given to today's entering freshmen, the Class of '68. Things have changed! Now, instead of meeting ferocious sophomores intent on demolishing them, the freshmen are met by hordes of over-zealous orientation counselors determined to make life as easy as possible. Now, instead of developing class spirit through cooperation necessitated by the laws of survival, they sing songs. In "the good old days," the class had to unify for their own self-protection. Class rivalry was intense and the class had to fight for its rights.

In the 1800's, walking canes were popular but the freshmen were not allowed to carry them unless they had proven their worth. Soon after arrival, the annual Cane Rush took place. The freshmen and sophomores fought to place the sacred cane in the hands of an upperclassman. If the sophs succeeded in doing this, the freshmen could not carry canes until after Thanksgiving.

Not all inter-class events were sanctioned by the University. Morris Bishop, in his engrossing book, A History of Cornell, tells of the sophomores' attempt, in 1880, to drug the freshmen's food. Fortunately, they did not succeed. Sometimes, however, their schemes were carried to completion. In 1881, they managed to kidnap five freshman officers, despite the fact that the class president used his revolver to defend himself.

There was no banquet scheduled for the Class of '68. In 1884, however, when there was one, the freshmen were unable to enjoy it. It seems that the sophomores, through an ingenious scheme, conned the caterer into giving the banquet in Trumansburg. Needless to say, the sophomores dined well.

The freshmen even had to fight to get onto campus. In the traditional class rush, the sophs blocked...
Cascadilla Bridge and the freshmen had to battle their way through the violent opposition. This practice was abolished in 1908.

In addition to such activities, there was constant harrassment of freshmen. As Mr. Bishop puts it, "Certain of our members could also a tale unfold of midnight concerts in the silent city of the dead, of free lunches in which the principle item was scented milk."

Apparently, as suggested in the 1927 Cornellian, the Cornell scene began to take on a quieter air for the freshmen. "There was no great blaring of trumpets and clanging of cymbals as we, one by one, slipped into Ithaca. Quietly...we found our quarters, selected suitable eating places, paid for hundreds of subscriptions, registered with Davy Hoy, selected our courses, bought our caps, and became Cornellians." The greatest change was in the attitude of the upperclassmen. "Our first initiation into affairs essentially Cornellian was the rushing season. We were wined and dined, and whisked about. Our ideas concerning the inferiority of the first year were rudely jarred as we were our own masters in the wildest scramble we had ever experienced. There was no quarter asked, every man for himself."

Some things have remained the same down through the ages. The 1934 Cornellian relates: "We join 1400 members of the new class...in a big line so that we may be stamped officially as undergraduates." But some were reverting back to the olden days. During rushing, the "freshman reigns as man among men—that is temporarily. Comes the day when reluctantly a cap is bought and placed on head. The first blow has fallen."

The freshman beanie may be a thing of the not too distant past, but there was a time when it reigned supreme. In 1921, there was the famous Morelli case, in which Fred Morelli, a freshman, refused to wear his beanie. After being thrown into Beebe Lake, chained to a tree, and almost destroyed by a mob, it was suggested that, for his own welfare, he leave. Shortly thereafter a storm ensued on campus, during which distinguished professors threatened to resign, Morelli returned the next year, still minus his beanie.

Our freshman men might trace their dating difficulties back to Dean Lucile Allen, who was quoted in the 1951 Cornellian as telling "her flock of freshmen in their trailing skirts and tennis shoes (the New Look) that they could afford to be choosey." The coeds were soon to be all too aware of Dean Allen's words. "During those first carefree days of Freshman Week we hung our beanies in Dickson...and set out to explore the wonders of the ratio and all it implied."

The 1960 Cornellian indicates that by 1956, the freshman males were also painfully aware of the implications of the ratio. "All but our most polished swains stood by in impotent rage as our girls, our classmates succumbed to smiles from the impassioned dandlings of fraternity row."

And so we arrive at the modern era.
Cornell Home Ec Goes to Ghana

by Rochelle Yedvab '65

Sir Eric Ashby, Master, Clare College, University of Cambridge, speaking at the Cornell Centennial Convocation on October 9, said that "... the American-type university has brought a much needed democratization of the curriculum to Africa. Heaven knows, subjects like household sanitation and journalism need to be studied in Nigeria, and it is just one of the facts of life, which only an academic ostrich hides from himself, that in the context of African civilization, unless these subjects are included in college courses leading to degrees, they will not be studied. ... During its second hundred years, Cornell, and its sister universities in the United States, will profoundly influence, and may even determine, the pattern of higher education in scores of developing countries."

Dean Canoyer

Developing a similar theme, Dean Helen G. Canoyer of the New York State College of Home Economics at Cornell University, while addressing a Home Science Conference in Accra, Ghana, in April of this year, declared that "offering education in home economics, especially at the graduate level, to leaders from other countries is viewed as a responsibility by colleges in this country today." She adds that this is very challenging as "it requires knowledge of the cultural, social, and economic factors of the country of the students' origin, and wisdom to adapt our courses to meet their needs. ... At present too few faculty members in colleges of home economics know firsthand the countries from which students come to us."

Cornell University, the New York State College of Home Economics at Cornell University, the Ghanaian Ministry of Education, and the University of Ghana, are working on a joint effort called the Cornell-Winneba Project. This undertaking was initiated, 1.) to provide assistance in establishing a four-year program in home science at Winneba Training College, Winneba, Ghana; 2.) to stimulate research; 3.) to provide information and advice to Ghanaian educators; and 4.) to assist the Ghanaians in re-evaluating their home science program.

In April 1961, Dean Canoyer visited Africa as one of seven United States women educators brought together under the auspices of the United States Agency for International Development (AID) to conduct workshops with thirty-seven women representatives from fourteen African countries, on the education of the female population of Africa.

In September of the same year, sixteen women educators representing ten African countries, as part of a three-month study-tour of the United States, spent a week at Cornell's College of Home Economics where they observed the three-year program of research, resident teaching, and extension.

Ghana Requests Aid

The following spring, the Ghanaian Ministry of Education requested the assistance of the College of Home Economics in revising their two-year program, and in establishing a four-year program in home science at the Winneba Training College for teachers. After a good deal of thought and study, it was decided that the College would be able to help them. In June 1963, Cornell University and the Ghanaian Ministry of Education announced the signing of another agreement.

In September 1963, Dr. Kathleen Rhodes, associate professor of home economics education, went to Ghana as a Fulbright lecturer and research scholar for a year's work in curriculum development at Winneba Training College and the University of Ghana.

During her year at Winneba, among various activities, Dr. Rhodes worked towards establishing a course in human development as a part of the home economics curriculum, and taught a class on the subject. She said that the course had always been a part of education courses in African training colleges, but that it focused on the child's development in school rather than on human development in the family and home.

Committee Established

A committee of Cornell University faculty members has been established to help with some aspects of curriculum development in Ghana. The aspects include examinations, curriculum (source) materials, methods of teaching, and examinations in the various subject areas of home economics.

Last spring vacation, Prof. Harold Feldman, Department of Child Development and Family Relations; Prof. Grace Steininger, Department of Food and Nutrition; Assoc. Prof. Kathryn Walker, Department of Household Economics and Management, Ass't Prof. Nancy Conklyn, Department of Textiles and Clothing; and Dean Helen G. Canoyer attended a curriculum workshop and a Home Science Conference for 150 leaders in Ghana.

Dr. Rhodes believes that "you can't just transfer programs from here to there. You must know the needs of the Ghanaian people and adapt the instruction to their needs."

The government of Ghana recognizes the need for a good home economics program and is putting additional money into education and health services in an effort to build up the labor force. Ghana wants to be an industrial country and, therefore, wants well-educated workers. They realize that home economics can play a vital part in improving homes and bringing up children.
The Home of Big Red Football

by Donald Semmler ‘67

Fans could watch the 1920 Williams game from their cars.

The awakening of Cornell football may be said to have transpired on a nine acre plot of land below Fall Creek which is now occupied by Ithaca High School. It was here, on October 19, 1889, that the formal inaugural of Percy Field and a 124 to 0 rout of Rochester took place. The Big Red were rated number four in the nation for that season’s efforts.

The glory of Percy Field was unsurpassed, with Cornell fielding some of the greatest teams in its history during this period. But the repute of Percy Field was to be short-lived. It was doomed by its location in the valley. By the time afternoon labs were over and the players had run the mile down Gun Hill, the autumn shadows were already long. And as flood lights were still a thing of the future, practices often had to be cut short. The need for centralizing team activities became more and more apparent, if from the standpoint of convenience alone.

Ceaseless efforts on the part of Cornell alumni led to the provision of adequate facilities for the Big Red teams. The change from Percy Field to Schoellkopf Stadium came at the peak of Cornell football. The 1915 team was the first and one of the greatest teams to play on Schoellkopf. With a record of nine wins, no losses, and no ties, they were the National Champions. The defensive line had not allowed a touchdown to be scored by its opponents in sixteen straight games (1914-1915).

Although Schoellkopf Field and Stadium were first used in May 1915 for a track meet, it was not dedicated and formally opened until Saturday, October 9, prior to the Williams football game. The trustees, faculty, and five thousand students marched from Goldwin Smith Hall to the stadium. After arrival there, George W. Bacon, ’92, chairman of the Alumni Field Committee, was the first speaker, talking for the men who made this giant athletic plant possible. Following him, Paul Schoellkopf, ’06, formally presented the keys of the field and the training house to University President Jacob G. Schurman, who delivered the acceptance speech.

The money for the field and stadium came from the small contributions of many alumni and generous gifts from the family of Jacob Schoellkopf of Niagara Falls, N.Y.

Schoellkopf Field was surrounded by a quarter mile track with 220 yard straightaways. The new stadium made provision for a new transportation fad, the automobile. There was room above the rectangular stands to park 119 automobiles, the occupants of which had an excellent view of the whole field—over the heads of the other spectators. The seating capacity of the concrete stadium was about 9,500 people.

As Cornell football began to draw more and more spectators, it became necessary to add to the seating facilities. In 1924, this was accomplished when the Cornell University Athletic Association added to the rectangular stands, forming the Crescent that is in use at present. The seating capacity was more than doubled to 21,500 seats and 39 private boxes. The Cornell-St. Bonaventure game formally opened the Crescent in September 1924.

Further expansion was again called for following the Second World War. In 1947, a permanent steel structure was constructed on the western side of the field. This increased the seating capacity to 34,000.

In 1916, Willard Straight, ’01, donated funds to build the Schoellkopf Memorial Hall in memory of his friend Henry Schoellkopf, ’02. Henry (“Heinie”) Schoellkopf was one of Cornell’s greatest athletes. He had been an outstanding player on the Cornell elevens of 1900 and 1901, which had 10-2 and 11-1 won-loss records, respectively.

Located on the northern end of Schoellkopf Field, Schoellkopf Memorial Hall was the home of the Athletic Association for forty-three years from 1916 to 1959. Compulsory physical training had its beginning here in the early 1940’s.

Offices of the Athletic Association have since moved to newer and larger facilities at Teagle Hall (the gift of the late Walter C. Teagle, ’00, and Mrs. Teagle). However, Schoellkopf Memorial Hall is still the home of Big Red football. The coaching staff and managerial offices are located here, as are the locker rooms for the players. There is also a small gymnasium on the upper floor.

Schoellkopf Field has been home for Big Red football, lacrosse, and track teams for almost fifty years. In that time, there have been both good squads and bad, thrills and disappointments—all of which have been taken in stride with the tremendous growth in the popularity and diversity of Cornell athletics.
If the tattered image of the provincial hayseed farmer isn't already buried, it soon will be. Via the press, radio, TV, and national magazines, and through a concerted effort by agricultural interests, a "new breed of farmer" is being introduced to the urban population.

This new breed of farmer, says Petroleum Today magazine, is that of a tough-minded business executive with the brains, brawn, and courage needed to run an enterprise which grosses fifty thousand dollars a year—the average annual gross income per farm of the nation's 350 thousand leading farms.

These top agriculturalists grow close to sixty percent of the nation's farm products, yet they represent only fifteen percent of all farmers. However, the breed is growing. Added to its ranks each year are the students from the agricultural colleges (at Cornell and other universities) who bring new methods and the modern desire to "think big" to rural America.

New York State has a large share of these pace-setting farmers. Agricultural New York produces more than fifty different products and today ranks first in the production of a good many of them. The capital investment of many leading state farmers is well over half a million dollars. The modern New York State farmer is a man who works hard, carries a sizable business, constantly fights the elements, participates in community affairs, and likes to buy the same goods and services we all purchase for better living.

As part of the movement to update the public image of New York's farmers, the Department of Extension Teaching and Information in the Colleges of Agriculture and Home Economics is releasing seven new black and white and color films dealing with this hard working, community-minded agri-business man.

The films were produced by the Colleges' TV Film Center, under the direction of Professor William B. Ward, for use both on television and in the classroom. First major showings will be in conjunction with Farm-City Week, November 20-26. Each film uses the personal approach to bring out the important idea that agriculture has changed, and, in the words of President Johnson in his official Farm-City Week proclamation, that "never before in history has so much food and fiber been produced by so few farmers for so many people throughout the world at so reasonable a cost."
Four of the films introduce the viewer to four leading New York farmers and their families. Each featured farmer is clearly a member of the "new breed." As the viewer tours their modern poultry, dairy, vegetable, and fruit producing farms, he sees working examples of the efficient methods and machines which are the tools of every progressive farmer's trade. By example, these films show the decisions facing all farmers who are meeting the challenge of change.

Two of the films' subjects, Don Nesbitt of Albion and Harold McEachron of Salem, are Cornellians, the third, Walter Henry of Hamburg, has sent his three sons to Cornell, and the fourth, Don Hanks of Salem, studied economics at Dartmouth. Each displays a sound knowledge of the business and management skills that are necessary to keep an enterprise superior in its production and profits. It becomes obvious that the payoff in farming today is for intelligent management, not for back-breaking labor.

The remaining three films in the series are of a more general nature—one provides a sampling of the thoughts and ideas of several up-to-date farmers; another takes an exploratory look at the latest in modern farm machinery; and the third summarizes the features of the changing agricultural scene.

"Today if a farm boy wants just to drive a tractor," notes one farm economist, "he'd better get a job in road construction. If making tough decisions and driving hard bargains make his belly ache, farming is the wrong business for him to be in."

Cornell's television films introduce the new breed of New York State farmer and show him driving the best tractors ever available. But they also show the specialist who expands his agri-business by limiting its scope, and who depends upon other specialists to provide him with fuel, feed, machines, and much of the food he needs to feed his family. The farmer is shown as a student, reading up to ten monthly agricultural publications and paying constant attention to new developments as they are reported by agricultural college bulletins and extension agents.

The films discover the farmer in his role of capitalist, one whose income may be the same as that of a factory worker but who has a $200 thousand dollar investment to compare with the factory worker's three dollar lunch pail. And they show him as a philosopher who sees our exploding U.S. population and the problem of world hunger as man's greatest challenge.

Having met the new farmer, even the most citified viewer will begin to understand him better and to realize the magnitude and the complexity of his 130 billion dollar yearly business.

As emphasized by Professor Ward, a society as complex as ours cannot exist successfully without the understanding and appreciation of each specialized segment for the next. Such understanding promotes fair government, better intergroup and interregional relations, and a maximum of cooperation between segments, no matter how different in background and individual in purpose.

With these high goals in mind, agricultural leaders across the nation will mark this year's Farm-City Week with a campaign to introduce urban America to the new breed of farmer and to the modern "pastures of plenty" which are his home and the wealth of our nation.
“Pizza is better in Brooklyn!” I overhead a disgruntled American say as he left a Florentine restaurant. And he is probably right!

Many Americans touring Italy are disappointed when their misconceptions of the country’s cuisine are revealed. Pizza, for instance, a traditional food of Naples and southern Italy, was introduced into northern Italy after World War II by hungry American G.I.s. The soldiers remembered the savory pizza made popular in the States by southern Italian immigrants.

I have just returned from Italy, where I attended Syracuse University’s extension in Florence for a semester. During this time I was the guest of two Florentine families. The city embodies the beauty and grace of the Italian Renaissance. My home was built in the fifteenth century and overlooks the Arno, the wide river which marks the city center.

Cultural assimilation was difficult at first. With the help of my adopted family, however, I began learning the names and flavors of new foods and their methods of preparation.

Signora Cavalli (momma), the maid, and I did the daily food marketing at the open air stalls. A modern supermarket was opened in Florence but the Signora put little faith in cibo in scatola, frozen and prepared foods. A heavy rain in the evening was always a joy. That meant the peasants would be bringing mushrooms in from the countryside, and tender salad greens, which seemed to sprout over night, would be on sale at the market the next day.

Angelina, our maid, carried the basket, and Momma bargained over prices with the merchants. If peas were on the menu for the following day, the previous evening was spent shelling and discarding the less desirable ones. Pasta (macaroni and spaghetti) was a standard feature of the noon meal. There are special shops dispensing this Italian staple. Noodles of every imaginable size and description are placed in large burlap sacks for the customers’ easy selection.

An American couple I knew in Florence, who were studying at the University on a Fulbright Scholarship, were finding great difficulty in selecting their food at the market. The vegetables and fruits are often very different from the ones American housewives are used to seeing on grocers’ shelves. My friend had always imagined herself a clever and inventive cook. She had never realized how much she had relied on prepared foods in her recipes. She found starting from scratch, in every meal, a time consuming task. The end product in Italian cooking, she discovered, is often unpredictable.

The Italians, like their neighbors on the continent, have cappuccino, coffee with milk, and panino or roll, for breakfast. The shops are shut from noon to three o’clock when everyone returns home for pranzo. The main meal of the day, pasta, meat, salad, fruit, and, of course, wine, is meant to last until a light supper at 9:30 or 10:00 p.m.

Italians returning from work or studies in the U.S. have found eating habits on this side of the Atlantic strange and puzzling. They always complain about the American “coke and hamburger lunch.”

“You’re hungry all day,” complained one Italian friend. “First you eat too much for breakfast, then too little at lunch, and dinner comes at the unheard of hour of six o’clock!”

Anyone looking for a bit of Italian meal-time atmosphere at Cornell can find it weekly in Willard Straight Hall. Italians and Cornellians interested in Italian culture meet every Monday for an informal lunch and discussion. The food is standard American fare but the conversation and mood at the table recall the Italian way of living.
Would you like to enjoy some prime hunting this fall? There are many excellent areas in the Ithaca vicinity, and many are within walking distance of the Cornell campus. If you like to leave your books occasionally and take to the woods with your gun, you couldn’t have come to a better school.

A hunting license must first be purchased at the County Clerk’s Office in the Tompkins County Court House, at 320 North Tioga Street. The resident small-game fee is $3.25. A big-game license for deer is an additional $3.25. A student who is not a resident of New York State, but who is registered at Cornell for the school year, may purchase licenses at these resident rates.

If you have never been a licensed hunter in New York State, you must take a hunting safety course before being issued a license. The County Clerk will supply names and addresses of qualified instructors. If you have previously held a New York license, however, you have only to submit it when purchasing your new license.

Students living in University Residential Halls are not permitted to keep fire arms in their rooms. Therefore, if you have no place to store your weapon, it can be registered with the Cornell Safety Division and kept there. You may, then, check it out whenever you wish to use it.

The hunting season began October 5, with the opening of the squirrel season, which will run through December 31. The squirrel population of the Ithaca area consists primarily of gray squirrels—the same kind you see frolicking about the campus. The campus squirrels, however, are like their wild cousins in appearance only. Wild grays are shy, wary, and fast.

A good area to hunt the grays is near the Tompkins County Airport. The airport is about a forty minute walk from campus, north on Warren Road. A large wooded field lies directly across the road from the airport, and farms and woodlots dot the east side of the Cayuga Valley, sloping down towards the lake. Unposted land may be entered without permission, and farmers who post their woods will generally allow hunting on their land if you first ask permission.

After the leaves have fallen, you may prefer to hunt squirrels with a rifle. A productive method is to sit quietly near a feeding area, and let the squirrels show themselves. Watch for the large nests of leaves high in the trees and for the hulls of beechnuts and acorns. They are clues to the best spots. The limit on squirrels is five per day, but if you bag more than two of these elusive animals, you are doing well.

The ruffed grouse becomes fair game at the same time as the squirrels, and they too will remain “in season” until December 31. You will often find grouse in the thickest, brushiest part of the woods and will have to shoot fast, for you may only see the birds for a second or two. They flush with a startling flurry of wings, and you will shoot at many, many more than you will ever hit.

The wooded plot near the airport also offers some grouse shooting, but the best spot is probably the Connecticut Hills area, about ten miles south of Ithaca. The area is large and wild and is reached by dirt roads. When hunting there, you should wear sturdy shoes and tough clothing. Go with at least one other person, and carry a compass. It is not difficult to get lost in the tangled growth. You’ll find action there, however, and a rigorous test of your reflexes. A shotgun that is short and light may help you to gain the necessary split second’s advantage over these birds.

Pheasants and cottontail rabbits come into season in the early autumn. The pheasant season lasts only three weeks, to November 7, but the rabbit season runs through February. The pheasant population is not very large in the Ithaca area, but there are plenty of rabbits. The east slope of the valley has many large fields with perfect rabbit cover. If you can find a field which is also near a cornfield, your chances of finding both rabbits and pheasants will be good. Make certain that you are shooting at cock pheasants, recognizable by the long tail and colored head feathers, as it is illegal to shoot hens in Tompkins County.

If you are planning to be in Ithaca over Thanksgiving vacation, you may want to hunt deer. This year’s season runs from November 16 to December 1, and you can shoot from 7 a.m. to 5 p.m. The Connecticut Hills area is excellent. Rifle hunting for deer is illegal, so you must use a shotgun and rifled slugs. It is inadvisable to use a gun smaller than twelve gauge—the higher gauges lack the necessary power.

Again, it is advisable to go with a group. Spread out in a long line, pick a spot, and sit quietly. You may see does which have been driven about by other hunters, but sharp eyes will be needed to spot the wary bucks.

For more information on local hunting spots, you might talk to members of the Tompkins County Fish and Game Club, at 1649 East Shore Drive, in Ithaca. Perhaps they’ll even ask you along.
The staff of the Cornell Countryman wishes a speedy recovery for Mike Whittier, '65, a fellow agricultural journalism major and sorely missed friend. Mike was involved in a one-car accident, September 18, while returning to Cornell from his home town of Freeville, N.Y., via Route 13. Although in critical condition for two weeks, he is fighting his way back with gusto.

A patient at the Charles S. Wilson Memorial Hospital in Johnson City, N.Y., Mike is receiving visitors, but would also like to hear from his friends at Cornell and from around the state by way of a letter or two.

Mike was editor of the March, 1964, issue of the Countryman and has had several articles published therein. He received a $25 prize from the Guldin Award Committee for his article: "Cornell Research Promotes Sugar Industry" (April 1964).

We hope that Mike will be back turning out more excellent articles for the Countryman as soon as possible.

A section of Arnot Forest, near Van Etten, N.Y., has been dedicated to the late Prof. A. B. Recknagel, leading forester and Cornell University faculty member.

The area dedicated is a red-pine plantation planted by the late professor 28 years ago. Known as the A. B. Recknagel Memorial Forest, it will be used for research and public education.

A new road, also named for the forester, leads to the remote plantation, which previously was accessible only by foot trail. A shelter also was constructed to house exhibits illustrating the classical forestry principles of which Prof. Recknagel wrote in his textbooks. A stone cairn with bronze plaque marks the area in his memory.

The late forester earned his B.A. and Master of Forestry degrees, magna cum laude, at Yale, and after seven years with the U.S. Forest Service, spent 30 years on the forestry faculty at the College of Agriculture. While at Cornell, he was named director of Arnot Forest, and also headed the forestry department.

Among his important contributions to forestry were his 45 years of active work with the Empire State Forest Products Assoc., and his many years of active participation with the N.Y. Section, Society of American Foresters.

Cornell University’s dairy cattle judging team has placed third at the Dairy Cattle Congress held October 5, in Waterloo, Iowa. Cornell, one of the thirty-two college teams competing in the National Intercollegiate Dairy Cattle Judging Contest, was beaten only by Pennsylvania State University which took first, and California State Polytechnic, placing second. The team members, Richard Barie, W. Sheldon Atherton, Dennis Ferguson, and alternate Lee Scheifrik, along with their coach, Prof. George W. Trimberger, have kept up Cornell’s record of five wins at three year intervals.

Alpha Zeta, honorary agricultural service fraternity, has named Stephen Middaugh, '62, as their high chronicler. This national post is normally filled by university personnel. Middaugh represents the first Alpha Zeta alumnus in the business world to be so-honored. Presently a district manager in Gary, Indiana, for Jewel Tea Company, Middaugh received his M.A. in business and public administration before leaving Cornell in June 1963.

Prior to joining Jewel Tea Company, Middaugh was quite active on the Cornell campus. He served as advertising and business manager of the Cornell Countryman, and was elected to Pi Delta Epsilon, national journalism honorary, and to Ho-Nun-De-Kah, senior men’s honorary.

The communications programs of the Colleges of Agriculture and Home Economics have been recognized as tops among all land-grant universities in the nation.

The two colleges and their Department of Extension Teaching and Information received first place awards for publications, press service, photography, television films, and exhibits. This represented the largest number of blue ribbon awards to be given at this year’s meeting of the American Association of Agricultural College Editors, at Las Cruces, New Mexico.

Professor Robert M. Smock of the pomology department was recently honored with the first distinguished teaching award ever presented by the American Society of Horticultural Science. He received a cash award and an engraved plaque at the Society’s annual meeting at Boulder, Colorado.

Professor Smock has been a member of the Cornell teaching and research staff since 1937. In 1957, he worked in India on a Rockefeller research grant, and, in 1958, rendered his services in New Zealand on a Fulbright research grant.

Professor Smock has been a member of the Cornell teaching and research staff since 1937. In 1957, he worked in India on a Rockefeller research grant, and, in 1958, rendered his services in New Zealand on a Fulbright research grant.
CURW: A History of Cooperation

by Robert Massa '65

Cornell United Religious Work is one of the unique institutions that help make Cornell the progressive university which it is today. CURW is an unusual organization whose participants include, not only representatives of most religious denominations, but also individuals who profess no faith or who are undecided. All of these various groups are housed in one building, Anabel Taylor Hall, and work together effectively. However, this smooth running and extremely successful organization did not come about overnight. It is the product of almost 100 years of effort.

In January 1869, only four months after the University opened, twelve students organized the Young Men's Christian Association (YMCA). Later, in 1872, they changed the name of the organization to the Christian Association of Cornell University (CACU). At this time the group held its meetings in White Hall, but as membership grew, more and more people felt that Cornell should have a special building for student religious activities. John R. Mott, then the vice-president of CACU, was the driving force behind this spirit. A fund-raising campaign was organized in 1887. The students managed to raise $10,000 from faculty members and other prominent donors, but this was far from their goal. At this point, one of the University Trustees, Alfred S. Barnes, became interested in their work and gave $45,000 for the project. This led to the construction of Barnes Hall, which now houses the Campus Store. In 1889, Barnes Hall was dedicated and the seed of CURW, as it is known today, was sown. Legally, the University owned the building and it was to be used solely by the Christian Association which shared the cost of upkeep.

It was not until 1913 that the first clergyman, Herbert Moore, a Presbyterian minister, was assigned to Cornell as a full time chaplain. In the following fifteen years, several other Protestant ministers set up congregations at Cornell. Then, in 1929, as both Roman Catholic and Jewish groups joined the program, the CACU was changed to CURW. This forward-looking project has since come to be one of the most successful and lasting of the many Cornell innovations in higher education.

In 1948, Myron C. Taylor announced that he would donate two million dollars to Cornell to build an inter-faith center for CURW. The result of this was Anabel Taylor Hall, the present home of the organization. The building typifies the spirit of CURW, for it houses not only places of worship for all faiths, but the offices of all the chaplains and various conference and meeting rooms. Anabel Taylor Hall is a monument to understanding and tolerance among men of all faiths.

One of the building’s most striking features is the Inter-faith Chapel, on the main floor. In this same chapel, people of all faiths can pray and hold services. It has a unique three-sided, revolving altar: one side for Roman Catholic and Protestant services, one for Jewish services, and the third, a plain altar which can be used by other denominations or anyone who seeks to pray.

The expenses for running Anabel Taylor Hall are shared by the University and the various denominations which use it. Thus, the founding principle, that Cornell would not be controlled by any religious group, is not violated. Cornell makes it possible for a student to practice his religion if he wishes, but it does not force him to do so. Nor does he have to join a particular group, or any group for that matter. The fact that atheists and agnostics are participants in CURW is living testimony of this.

CURW has come a long way from its feeble beginnings in 1869. Today, it is a very influential and beneficial force on the Cornell campus. Its activities are many and varied in the field of public service. Its director, Rev. L. Paul Jaquith, is a member of the University faculty, and the twelve chaplains are members of the University staff.

In summary, an appreciation of CURW comes from noting some of the distinctive features which characterize it. CURW combines non-sectarian, non-ecclesiastical ministry to students with the ministry of the organized communities of faith. It provides a chance for people of all faiths to work together for the common good, yet it maintains the distinctive values and individual integrity of each member. While there is much united effort, it does not seek to reduce all religions to their "lowest common denominator."
The director of Cornell University's new Division of Biological Sciences, Dr. Robert S. Morison, comes to Ithaca from New York City, where he was the Director of Medical and Natural Sciences for the Rockefeller Foundation.

Dr. Morison believes that his job here will be, "... to help make biology at Cornell as good as anywhere in the world." A unified curriculum in basic biology will be set up through this newly established division. Then, any student at Cornell will have access to a clearly defined group of courses that will provide a good background in the biological sciences. The new division should also help to tie in work in physics and chemistry that is applicable to biological investigations.

Dr. Morison also recognizes that "... good work in the sciences requires more substantial outlays for teaching and research equipment, and often, more for teachers' salaries than is usually needed in other fields."

The establishment of a Division of Biological Sciences at Cornell comes at a time of growing interest in this field. Dr. Morison feels that there is a need to study one body of knowledge for those interested in the field despite diverse particular interest. Whether a student wishes a career in medicine, cellular physiology, or plant taxonomy, he needs a background in the basic life sciences.

An increasing number of Cornellians have been requesting a program that would provide such a background. Dr. Morison also notes that a knowledge of biological principles is needed today just to be a good citizen. Such a background is necessary to vote and argue intelligently on issues of community interest, such as the spraying of elms or the fluoridation of water.

Dr. Morison believes that we need to make the life sciences more attractive to students. There is a need to attract the best minds in science to tackle the complex problems that exist in biology today. Many of these problems can significantly affect the well-being of society. Among these would be the problems of population control, food processing, medicine, or an area as broad and complex as that of preserving the biosphere to guarantee the continuation of life as we know it.

Dr. Morison considers the basic scientist to be the best equipped for teaching the underlying principles behind the many diverse areas into which biologists branch out. The specialists, in application of scientific knowledge to the solution of practical problems, would remain in other divisions or colleges. The Division of Biological Sciences would provide both a focal point for communication among the specialists and a place for students to acquire a background from which they could later diverge.

The author of Scientist, published this year by the Macmillan Company as the sixth in their Career Book Series, Dr. Morison, relates that its purpose is to help young people who are searching for information regarding a profession.

Dr. Morison pictures the type of person a scientist is, and what the requirements are for the many different careers in science. He also provides a critique of the various kinds of educational institutions in this country to help the prospective science student in making a good choice.

What Dr. Morison hopes the Division of Biological Sciences will achieve, in the broadest sense, is probably best found in his comments about colleges and universities in Scientist. He sees future scientists making their career choices at the collegiate stage. He says of the university: "During this period ... they should not only lay a solid groundwork of scientific information and habits of thought, they should also gain a clear idea of what it's like to be a scientist." He states further that a good college offers its students the opportunity "to observe real live scientists at work and to participate in some research."

Dr. Morison's background in the sciences is broad and diverse. He received a Bachelor of Arts degree in 1930, from Harvard University. In 1935, he was granted an M.D. from the Harvard Medical School. After serving as a resident physician at the Collis P. Huntington Memorial Hospital in Boston, he taught at the Harvard Medical School in the fields of anatomy and physiology for ten years. Dr. Morison then joined the Rockefeller Foundation before coming to Cornell this fall. The University is indeed fortunate to have acquired the services of a man with so distinguished a career.
J. SELLMAN WOOLLEN, '14, 107 Catherine St., Ithaca, N.Y., the grandfather of eleven children, retired in 1960 after nine years on the staff of Albert R. Mann Library. Prior to this, he had devoted his time to farming and nursery work in Maryland.

COLONEL WILLIAM H. SPEIDEL, '16, 245 Eaton Lane, West Islip, Long Island, N.Y., retired from the U.S. Army in 1952, after thirty-five years of service. From 1953-1957, he was Manager of Public Relations at the Hotel Alamac in N.Y.C. Col. and Mrs. Speidel returned from a three-and-one-half month tour of the Orient in April 1963.

WILLIAM R. BETTS, '21, 365 Clinton Ave., Brooklyn 38, N.Y., before retiring in 1962, worked for the Ford Motor Company as an Assembly Plant Inspector, and for Aetna Life Insurance Company as a field representative. Since retirement he has been working with the claim department of the Manhattan Life Insurance Company, N.Y.C.

WENDALL E. FIELD, '27, 15 Bradford Dr., Syracuse 24, N.Y., since graduation, has been an assistant and associate County Agricultural Agent, a director of Miscellaneous Services Department, Manager of Central N.Y. Regional Market Authority, and has been associated with the Youth Department of the N.Y. State Fair. He is now Director of Kiwanis, member of the Masonic Lodge, and Director of National Association of Produce Market.

PHILIP M. WHITE, '34, Mecklenburg, New York, is now working with his wife in their establishment, White Nurseries. A trustee of the Trumansburg Central School Board for eighteen years and former Training Officer of the U.S. Coast Guard, he is now a trustee of The Knoll Foundation and Commodore of the Ithaca Yacht Club.

CHARLES N. HUNT, '39, 40 Coe Avenue, Oakfield, New York, upon graduation from Cornell, taught vocational agriculture for seven years. In 1953, he joined the Citizens National Bank, and has since worked with the Prudential Life Insurance Co., the Exchange Bank of Oakfield, and the Liberty National Bank & Trust Co., where he is presently serving as Vice-President.

CLARENCE H. PADGHAM, '40, 16 Sandy Lane, Binghamton, N.Y., is presently employed as Associate County Agricultural Agent for the Broome County Extension Service and is a member of the New York and National Association of County Agricultural Agents. This past June he was a candidate for a Master's degree in Agricultural Economics at the Graduate College of the University of Arizona.

GLENN D. NICE, '41, 33 Academy Place, Canandaigua, N.Y., worked as a G.L.F. assistant store manager for six months after graduation. He has been in Ontario County agricultural work for 22 years. In 1957, Glenn worked on his Master's degree in education at the University of Florida. He is a member of the Canandaigua Rotary Club, the New York State County and National Agents Association, and an official livestock judge at county fairs.

ROBERT V. CALL, JR., '50, 8113 Lewiston Road, Batavia, N.Y., has been farming with his brother Dick, '52. At present they are operating 2800 acres: 1600 in vegetables, 300 in wheat, and 150 in corn. They also have 120 head of dairy cattle. Bob is a director of the N.Y. State Marketing Association and is on the Dean's Council of the College of Agriculture. In August, 1963, he spent three weeks on the People to People Trip to the Iron Curtain, including Russia.

KAREN GAY ANDERSON '57, 1820 Euclid Avenue, Berkeley, California, received her Master of Landscape Architecture degree from the University of California in 1962, and a Graduate Degree from the School of Architecture at the Swedish Royal Academy of Fine Arts in 1961. She is now associated with Jack H. Mahshii, Landscape Architect in Berkeley. She is also Secretary of the Northern California Chapter of the American Society of Landscape Architects.

EDWARD J. RICE, '59, Kingston, R.I., has been appointed to a research position of the United States Rubber Company Sumatra Plantations in Indonesia. He will take part in research work in establishing a plant food crop development project and will train young Indonesian agricultural scientists. Rice has earned M.S. and Ph.D. degrees in agronomy while attending the University of Rhode Island. September marked the completion of requirements for his Doctor of Philosophy degree.
A vital factor in the dynamic growth of modern agriculture has been the prompt and accurate transmission of information from the laboratory of the research scientist to the hands of the farmer.

This information comes to the farmer through such agencies as the New York State Cooperative Extension Service. Radio and television programs, news releases and visits by county agents are but a few of the methods used by the Extension Service to relay new ideas and techniques.

But, today's agriculture requires cooperation not only between farmers and researchers, but between farmers and non-farm people as well. In an effort to create mutual understanding in and out of agriculture, the College of Agriculture has just released seven new color and black and white films that tell the story of today's dynamic agriculture.* These films dramatically portray why research, education, and understanding have been, and will continue to be, the keys to a strong and vigorous agriculture.

*see story pages 6-7.
CORNELL COUNTRYMAN
IN THIS ISSUE

The Sherwoods ........................................... 1
Beach Boys to Bio-Scientists ............................ 2
Beachcombers Petit ...................................... 5
Specialization—Theme of Agriculture's Progress .......... 6
An Open Door to Nature ................................ 8
Capsules .................................................. 10
Paperboard Ambassadors ............................... 11
The Great Tradition .................................... 12
Alumni .................................................... 13

Staff

Editors-in-Chief .................. Renate Rabeler '65 and Robert Fistick '65
Managing Editors .......... Cathy Johanson '65 and Kenneth Balmas '65
Circulation Manager .... Francine Grace '65
Librarian .................. Kenneth Goldstein '65


Sophomores: Marjorie L. Case, Alan L. Hall, William N. Jardine, E. Pat Robinson, Donald G. Semmler, Joan E. Solomon, Jerryanne Taber.


Seniors: Frank Fee, Toni A. Gailey, Susan E. Isler, John P. Lowens, Peter L. Monnier, Wade M. Nye, Owen Wavrinek, Rochelle Yedvab.

COVER—The Sherwoods serenade a Pretty Miss by Jacques Lipshitz’s sculpture “Song of the Vowels” between Olin and Uris libraries.

Special Credit: Frederick A. Jancicuicz and Charles C. Smith, Jr.
The

Sherwoods

"The house lights are dimmed,
But on stage lights burn bright,
Where a band of fourteen,
All dressed in green,
Begin another entertaining night."

by Peter Monnier '65

The band of fourteen is a talented group of Cornell students known as the Sherwoods. Their song and wit have been carried throughout much of the free world and in the eight short years of the group's existence, have made the word Sherwood a symbol of entertainment at Cornell.

The seeds of success for the Sherwoods were planted in the spring of 1956 when twelve members of the Cornell Glee Club left to form the group. The founding fathers of the Sherwoods wanted to do more than sing; they wanted to make the audience laugh. They wanted song to be only a part of the general entertainment, with the members' own wit and humor filling in the rest. The result of this unique combination of song and wit was an almost overnight success for the group—a success which has never stopped growing.

The Sherwoods are polished performers. At any moment they can have their audience rocking with laughter in response to a joke or skit, and a moment later have them listening in fascinated silence to the intricate harmonies of a song like "Danny Boy."

But the smoothness of a Sherwood performance, and their apparent ease before an audience, is not all the result of the group's spontaneous talents. Long hours of study, censoring, singing, and discussion are spent before the final polished product is ready to be shown. Many songs that the group sing are painstakingly arranged, exclusively for and by the Sherwoods. Even old standards like "The Surrey With the Fringe on Top" have been arranged by the group so that the potential harmony represented by the members can be fully expressed.

With all this preparation, the final performance is still a mixture of planned and unplanned entertainment. Often, one or more of the members will improvises upon a skit or joke, or even break into a different harmony, giving the group that flavor of informality for which it has become famous.

The Sherwoods perform before audiences of various types. If they're not performing at a University function, or at a fraternity party, they might be singing at some other school or college. They might even be planning another album to add to the five that they have released already.

The activities of the Sherwoods don't stop here, however, for each year they sponsor a show called "Fall Tonic," in which the various college singing groups that the "Woods" have picked as being the best in the middle and eastern sections of the country are invited to perform at Cornell. The Sherwoods pick the groups by listening to the records and live performances of as many groups as possible throughout the year.

When summer vacation starts, and the Sherwoods are freed from their functions as students, the group still continues to perform. During the past summer, the Sherwoods accepted an invitation by the United Service Organization, (USO), to perform for American troops stationed in Western Germany. There they spent seven weeks absorbing German culture during the days, and brightening the lives of thousands of troops during the nights, an experience which alone might make being a Sherwood an enriching experience.

Whether performing here or abroad, the bright response that the Sherwoods have received is a reflection of their abilities as entertainers. The group has come a long way from the spring of 1956 when those first members decided to entertain in an informal, spontaneous fashion.

As they've progressed throughout the years, entertaining throughout much of the world, and bringing back their experiences to Cornell, the Sherwoods have not only enriched themselves, but also have left their audiences here at Cornell with that intangible something which has made the Sherwoods a tradition.
BEACH BOYS

to

BIO-SCIENTISTS

by John Lowens '65

And so the boy who was once an aimless beach bum was transformed into a studious marine biologist and skin dived happily ever after.

Sound like a fairy tale? It is. Yet with this vision as their main motivation, thousands of high school students apply to colleges each year. They are thrilled by the films, books, and other publicity given to the exciting science of marine biology, and on this basis alone they plan for a future career in that science.

Unfortunately, most of them do not really know what a scientist is. A tragic number of first-year biology students give up higher education or lose precious time and money by drastically changing their college programs after only a few months of study. They are disappointed to find that a marine biologist is more than a skin diver who has exchanged his speargun for a specimen collection bottle.

This article isn't written to discourage those would-be scientists. It is written to take the magic story of success, the change from beach bum to biologist, out of the realm of juvenile fiction and to present it realistically.
Many colleges and universities offer good undergraduate programs in biology. In most of these programs the undergraduate phase is completed in four years with the award of a Bachelor's degree. Undergraduate students have little opportunity to do specialized work in marine science. The purpose of undergraduate study is only to provide a base for advanced and specialized study. It teaches the skills required for accurate original research projects.

The first and perhaps the most important lesson for future marine biologists, therefore, is that in the first few years of college there are almost no courses given in marine biology. Only a handful of undergraduate institutions offer laboratory work along the shore.

One of the finest undergraduate programs available to the prospective marine biologist is found in Cornell's new Division of Biological Sciences. The following summary of Cornell's program is a history of the early academic life of the typical marine biologist.

For the first two years, study is all of the most basic nature. Introductory courses in zoology and botany initiate training in the laboratory and a knowledge of the terminology of biological science. There are literally hundreds of terms to memorize and associate with strange organisms, parts of organisms, and the processes of life which they undergo.

Basic, analytic, and organic chemistry are studied, so that the chemical nature of the aquatic environment and of living tissue can be understood. Geology is necessary as a basic course. Labs include field trips and the study of fossils, our link with the living past.

Physics is studied as an essential background course for the study of oceanography. Courses in calculus and in statistics are also elementary in the education of all would-be marine biologists. Understanding of higher math is essential in the study of chemistry and physics; and the science of statistics is an important tool of the biologist.

All new scientific observations are made public through scientific journals and books, and a researcher who cannot make his findings available to the public and to other scientists is useless. For this reason courses in English, the literature of science, and scientific illustration are desirable.

Most of this program of basic studies is completed in the first two years of college. These are two years of late nights, tedious work in the lab, and exhausting study. At Cornell the underclass biology student spends about thirty hours each week in the classroom, lecture hall, and laboratory, as compared to fifteen hours for, say, the English major. Where the English major is, from the start, allowed to concentrate his studies on his particular field of interest, the biology student cannot do so until later in his college career. Many a would-be scientist has dropped out of college because of poor grades in English or math. As is seen above, future marine biologists must be prepared to take courses not directly connected with biology.
SPECIALIZATION
THEME OF A

by Peter Tukey '66

When Cornell University was just getting its start in 1865, agriculture was an easily defined entity; agriculture was farming and farming was virtually the sum total of agriculture.

In the century since 1865 the agriculture of the United States has vastly changed. It has, of course, grown in size, that is, in the actual number of acres in production. But the most important change in agriculture—the change which has enabled it to feed and clothe a population that has increased three fold in a century while employing an ever decreasing percentage of the country's labor force, has been a change in the very nature of agriculture. The change has been from an agriculture, centered only on the farm, to one still centered on the farm but supported by a wide spectrum of industries.

This cooperation between farming and the supporting agricultural industries has allowed an impressive increase in efficiency on the farm. The development of hybrid seed strains, insecticides, and fertilizers have greatly improved per acre yields. The development of the internal combustion engine has given farmers the tractor, thus liberating thousands of acres of land previously devoted to the feeding of draft animals in the production of crops and livestock for human consumption. The creation of processing industries, and improved transportation and marketing systems have implemented farm specialization and thus increased efficiency by making available to the farmer expanded, often distant markets for his produce. In short, specialization in agriculture has been responsible for the development of the efficient agriculture industry we have today.

The first classes held at Cornell University Agricultural College concerned themselves with agriculture as it was then—actual grass roots farming. As agriculture expanded in scope, so did the College curriculum offerings. By 1904 the New York State Legislature, recognizing the trend in the development of agriculture, passed an administrative act which in part read:

"The object of said College of Agriculture shall be to improve the agricultural methods of the state... (and develop) better methods of handling and marketing such products... For the attainment of these objects the College is authorized to give instruction in the sciences, arts and to conduct extension work in dissemination of agricultural knowledge...; to make researches in the physical, chemical, biological, and other problems of agriculture, and the publication of the results thereof."

Under this directive the College extended attention to a prodigious spectrum of studies. The result of this expansion is the Agricultural College of today.

It should be noted that the basic purpose of the Agricultural College has not altered since its earliest days. The purpose of the college has always been service through education to the whole of the agricultural industry. The purpose of the college has always been service through education to the whole of the agricultural industry. What has changed is that industry it serves.

The farmer, of course, is still at the center of agriculture. All the rest of the industry revolves about his ability to make his land productive. The education of farmers thus remains a major objective of the Agricultural School. Toward this end Cornell offers a two-year course aimed at providing "specific training for definite vocational objectives." In addition there are a large number of specializations which provide an "education in science with emphasis upon applications in agriculture." These specializations range from general agriculture, livestock production and crop science to floriculture and seed technology.

Because agriculture today is not solely on the farm, the sciences which have given the farmer his improved tools and techniques have attained a position of unquestionable importance in agriculture. Likewise, they constitute a major sector of the curriculum of the Ag School. Biological in nature, the
"pure" science offerings range from the more applied areas of plant pathology and genetics through areas like dairy chemistry and food science to specializations in bacteriology and biochemistry. Study in the physical sciences also is available to the Cornell agricultural student through the courses he may take in the other colleges of the University.

With the increased knowledge of the physiology and pathology of plants and animals gleaned in the last one hundred years, arose the discipline of veterinary medicine. A school of veterinary medicine early found its place at Cornell.

Early in the history of Cornell's Ag School it was realized that the dissemination of this knowledge to the farming public was just as important as the discovery of a new farming tool or technique. Thus arose the extension teaching department. From the early concept of the Extension Service have developed the "majors" available in science teaching in high schools and journalism, as well as courses in speech, radio, and television.

And so it goes on. As changes took place in agriculture, Cornell's Agricultural School kept abreast or one jump ahead of developments in its objective of fully providing for the educational needs of changing industry.

A measure of the specialization level of the School of Agriculture today is reflected in the character of its student body. Numbering 1938, composed of 1648 men and 290 women, the undergraduate student body comes to Cornell from all parts of our country, as well as many other nations of the world. As a state supported institution, the School of Agriculture enrolls a majority of students from New York State, actually about 70 per cent. Another 17 per cent come from other states of the middle Atlantic region. New England provides five per cent, while the southeast accounts for only two-tenths of one per cent. From the Great Lakes region west of Pennsylvania comes about one and one half per cent of the class. Moving west, we see that about one per cent of the student body hails from the north central region, with one half of one per cent of the class made up of their counter-parts from the south. The far west, including the Pacific Coast and the extra-continental states, Alaska and Hawaii, provides one per cent of the class. From outside the United States the Agricultural School sports representatives from more than 50 lands numbering more than 300 enrolled in both the graduate and undergraduate programs.

The type of home and high school background of the Cornell agriculture student is varied. Of the men in the graduating class of 1963, 35 per cent were farm reared. The other 65 per cent presumably came from more urban or suburban environments. Approximately one sixth of the men entering Cornell's Agricultural College come to it from private schools, a proportion similar to the overall University distribution. The academic interests of the student body during its years here at Cornell are, of course, as widely varied as the course offerings of the school.

In the final analysis, the diversity and excellence of the education available in the Cornell College of Agriculture is shown by the achievements of its graduates and in the variety of their chosen fields. Statistics on the graduating class of 1963 show that about nine and one quarter per cent of the men entered farming upon receiving their undergraduate degree, with another 11 per cent entering agricultural business jobs. Public positions in agriculture attracted another nine and one quarter per cent of the class. Ten per cent of the men entered non-agricultural work and 16 1/2 per cent found themselves in the armed services. The largest single group of men went on to graduate or professional studies. This group amounted to nearly 30 per cent of the class. Of the women, 43 per cent went on to graduate work, 16 per cent entered high school science teaching and eight per cent began work in laboratory research. Sixteen per cent of the women graduates took up homemaking.

So this is the Cornell College of Agriculture, the image of the ever changing industry it serves and the reflection of the student body it educates.
Cornell Science Leaflets

An Open Door To Nature

by Kenneth Goldstein '64

Earth and Beyond, Food Chains, Little Climates, and Nature Poetry are but a few of the many titles of a unique series of pamphlets published by the New York State College of Agriculture. The Cornell Science Leaflets, as they are presently known, are written by Dr. Verne N. Rockcastle, Professor of Nature and Science Education, for the College as a public service to teachers and students of New York State.

These leaflets serve two purposes. They are intended to make the elementary student aware of the world in which he lives. They encourage him to learn, not only from books, but from his every day environment and experiences. They utilize and build upon the young student's natural curiosity to make learning both fun and intellectually stimulating, by developing the scientific spirit of observation and discovery as part of the student's every day life. Dr. Rockcastle's opening paragraph in one of his leaflets, Sound, October, 1960, is illustrative of his overall approach: "Before you read very far in this leaflet, close your eyes and listen to the sounds around you. What things can you hear? Do you hear a click, a car horn, people talking, a dog barking, the wind or rain, or leaves rustling? If it's winter, can you hear the snow falling?" It would be hard for the average child to stop here, the temptation to continue is too great.

Dr. Rockcastle uses a similar approach in his leaflet, Light, February, 1960; "LIGHT. Wham! Did you feel something when you looked at that word? Do you feel anything striking you now? You can not feel it as you would feel a ball, but light is striking your eyes with every word you read." Or perhaps he arouses interest by attention-catching statements; "Sunbeams can become mink coats through the natural processes of a food chain. If you observe carefully all nature's signs on a trip to a marsh, you may learn how." (Food Chains, May, 1962). An approach such as this permits the youngster to satisfy his natural curiosity in a meaningful way. It incorporates the scientific method into the everyday activities of the child in the hope that these will remain with him throughout life.

The second purpose of the leaflets, Dr. Rockcastle believes, is to "give to elementary school teachers information and teaching suggestions that are accurate and feasible." It is Dr. Rockcastle's hope that the leaflets will introduce to teachers, and indirectly their pupils, to what he terms "good science," as opposed to much of the commercialized science being presented on the market. While many of these books are excellent, there are quite a few that, in their concern for profitability, sacrifice either accuracy or essence to achieve an effect that will be acceptable to the largest number of people. Dr. Rockcastle discusses this problem in his leaflet Earth and Beyond, Fall, 1958. Talking about the lack of special perception in students' diagrams on the solar system, he states that "their books and blackboards consistently carry diagrams of the sun and all the planets in a small space." Or, as he states later,
“In trying to get across one idea to the reader, the authors have inadvertently introduced three incorrect ones.”

Later in discussing this topic, Earth and Beyond, he pretty well sums up his whole philosophy in regard to all his leaflets; “These and other fallacies about the earth and beyond must be corrected. Elementary pupils must be taught space relations as they really exist if these pupils are to be well-prepared for life in a space conscious world. This leaflet will help you understand some interesting and important facts about the earth and beyond, and may give you (the teacher) some ideas for presenting these facts to your pupils simply and accurately.” His purpose is to present the teacher with material that is accurate, interesting, and useable.

The publication of these leaflets is strictly a public service function of the College of Agriculture. It is part of the overall policy of the college to elevate and stimulate the teaching of science and nature study. The operation is non-profit but a charge of 25¢ per leaflet is required to cover printing costs.

A one year subscription may be obtained for one dollar by writing Cornell Science Leaflets, Stone Hall, Cornell University, Ithaca, New York. Approximately 15,000 copies of each of the four yearly leaflets are printed. A large number are saved for later use and to keep a backlog that will be able to supply back issues when needed. The rest are distributed to over 1,000 schools, the bulk of which are in New York State. However, the actual geographic distribution is quite large, with over 40 states and many foreign nations receiving copies. Though they are primarily intended for the fourth, fifth and sixth grades, their high level approach results in many junior high schools using them.

Generally the choice of topics comes from the teacher and pupils themselves, either through the mails or one of the many trips Dr. Rockcastle makes to the various elementary schools of the state. By going to the schools themselves, Dr. Rockcastle gets a much clearer idea of the areas that can be developed through his leaflets. He finds that the contact with the students and teachers is, in itself, very rewarding because of the added stimulation and insight that actual contact brings.

In choosing topics, Dr. Rockcastle tries to strike an even balance between the biological and the physical sciences. He feels that this is very important because of today’s increasing technological orientation, which threatens to relegate the biological sciences to a minor role. But in many cases it is hard to predict what will be popular and widely requested. Recently, departing from the usual format, Dr. Rockcastle produced an anthology of poems, Nature Poetry, March, 1964, and the response was overwhelming; it became one of the most popular leaflets to date. As such, it was an enormous vote of approval for the approach that these pamphlets take, as stated in the introduction to the collection; “Natural science today can be presented in a form that combines the spirit of the poet with the analytic curiosity of the scientist and makes learning a joy.”

That these pamphlets are making both learning and teaching a joy is indicated by the growing popularity of them as revealed by the rapidly increasing rates of reordering. But most gratifying to Dr. Rockcastle are the numerous letters he receives both from students and teachers. Recently he received a letter from a teacher in rural Idaho exclaiming “IT WORKED!!” It seems that the usefulness of these leaflets runs far beyond the bounds of the school. A lady from California wrote to Dr. Rockcastle to ask if there were really flying saucers, because he seemed to know so many things. A lady from Rome, New York, sent him some larvae to find out if they were harmful. But the letters came primarily from persons within the school system.

Typical of these letters is one from a teacher in Elmira, New York. She writes: “I want to share with you some of the fun we have had in the past two weeks in a unit of work about electricity (Electricity and Magnetism, Winter, 1956-57)... Some (students) were steps ahead of the teacher and had a light (they were making flashlights) before the wire was taped. Such remarks as, ‘Boy, this is neat,’ ‘It really works!’ ‘I did it myself!’ and ‘It lights’ gives a teacher a great satisfaction. They just couldn’t wait to take them home.”

... These became part of that child who went forth every day, and who now goes, and will always go forth every day.

—Walt Whitman
Three animal husbandry specialists have recently joined the staff of the New York State College of Agriculture at Cornell University.

Dr. Willard J. Visek, M.D., has been appointed professor of nutrition and comparative metabolism. A native of Nebraska, Visek received his M.S. and Ph.D. degrees from Cornell University and his M.D. from the University of Chicago, where he completed a rotating internship in University hospitals and clinics. Since 1957 Dr. Visek has been on the staff of the Department of Pharmacology at the University. He has also been a consulting lecturer for the Food and Agriculture Organization of the United Nations. At Cornell, Dr. Visek will teach animal nutrition and physical biology.

Carl E. Coppock, assistant professor in the extension division of the animal husbandry department, is a graduate of Ohio State University. Coppock received his M.S. degree at Texas A & M College and his Ph.D. from the University of Maryland. He spent two years in Laos as a livestock specialist for the International Voluntary Service. At Cornell his main interests will be in dairy nutrition and herd management.

Professor R. F. Deibel, associate professor of bacteriology in the College of Agriculture and Dr. V. H. Silliker of the St. James Hospital in Chicago Heights, Illinois, have received the American Public Health Association’s Scientific Award. The $500 award was given for studies concerning isolation of the bacteria, Salmonella, frequently associated with food poisoning. Their new method is expected to control the incidence of Salmonella in food.

Speaking at the 1964 Cornell Nutrition Conference for Feed Manufacturers, Prof. David L. Call of the Cornell Graduate School of Nutrition said that the increase in dogs and other pets in the United States has been great in recent years and the trend will continue. This will in turn continue to increase in human population, the rise in personal income, the trend toward more leisure time and suburban living, and increased commercialization as reasons for the increase in the number of pets and the use of pet foods.

In anticipation of this year’s holiday season, New York State College of Agriculture’s conservationist and professor Alex Dickson will be assisting Christmas tree growers across the state by means of marketing schools. To aid the growers in their planning, he will discuss methods of buyer contracts, needs for quality products, and will demonstrate general culture and ways of coloring trees by showing an Extension Service movie program.

Samuel W. Sabin, also assistant professor in the extension division of the animal husbandry department, received both his B.S. and M.S. degrees from the University of Wyoming and his Ph.D. from Oregon State University. For the past five years he has been an assistant professor in animal industry on the veterinary science department at the University of Arkansas. His work at Cornell will be with the 4-H Club programs in the areas of beef, sheep, swine, and horse projects.

Wednesday night, October 7, Professor A. A. Johnson, Director of Extension at the New York State Colleges of Agriculture and Home Economics, was elected to the International Crop Improvement Association as an honorary member. Since the ICIA’s founding in 1919, only 16 similar awards have been made. Professor Johnson’s outstanding service to agriculture both in the United States and Canada, concerned with production, marketing, distribution, and promotion of new and superior crop varieties, has earned him this honor.
Have you walked into a bank recently and seen a rather elaborate exhibit on The Miracles of Agriculture, and wondered just who made it and how it got there?

Here is the story of how the exhibits were made and how they got there. They are part of the New York State School of Agriculture’s display from the 1963 New York State Exposition in Syracuse. Every year a letter is sent out to all departments in the Agriculture school, probing for ideas for the coming exhibition. These ideas are selected with the knowledge that about 80 per cent of the people in New York State are from urban areas. One idea is then chosen, and is authorized for use by Dean Palm. Its purpose is to be educational.

The 1963 exhibit was perceived to show both urban and rural communities just what agriculture is doing for the total population. A series of 10 panels comprised the display. Entitled “The Miracles of Agriculture” the panels were picture stories, supplemented with a few words showing such aspects of agriculture as: Changes Over 60 Years, Biological Research, The Importance of Agriculture in Business, A Half-Century of Progress, and Agriculture’s Contribution to Human Health. In addition there were two panels, one showing the 3-Part Organization of the New York State College of Agriculture, the other telling of the future of Agriculture.

Professor Phillips of the Extension Teaching Department, who is responsible for the displays, points out, that each panel is like a chapter in a book, telling it’s own story. The accumulation of these ten “chapters” gives the total picture.

Just how the displays finally ended up in the banks is a result of a meeting of the Agriculture Council last February. During the meeting, the success of the exhibits was being discussed and supplemented with the displays. Mr. Robert Watts, Secretary of the New York Banker’s Association, was at the meeting and became very interested with the prospects of displaying the exhibits in banks throughout New York State.

Plans were then drawn up dividing the ten panels into a series of three or four panels each. Each series is now being transported throughout the state. Whether a bank receives one or more series, depends on the size of the bank.

It should be noted that the college is as happy to have these exhibits put to use, as the banks are happy to be able to have the educational matter to display. As a matter of fact, this series of exhibits is in such great demand that Professor Ward, head of the Extension Teaching Department, estimates it will be about a year and a half before all the banks have been able to use the displays.

In the meantime, the 1964 State Exposition has come and gone, and these exhibits are in the offering to be used by the New York State Nurserymen’s Association starting in January.

The idea used for last summer’s Exposition concerned the use of trees for ornamental purposes. The topic was chosen with much deliberation at the February conference. The subject of trees was finally chosen because of its implication in such fields as landscaping, especially in light of the highways which are being constructed throughout the state; or the importance of trees in relation to the fact that more and more people are living in suburban areas and need a knowledge of what types of trees to plant, if they will grow, and what to do to keep them trim. The idea of using trees was further perpetuated because of their ornamental value in Urban Renewal. Another aspect of trees considered was their ability to alter environment slightly, by changing the temperature, by adding moisture, and providing shade.

With this type of consideration, the committee was able to select the topic of trees as a broad enough field to interest a large per cent of the population. By the time the exhibit was completed, Professor Phillips said that he had worked very closely with the Floriculture Department and with fourteen specialists from the college.

At the Exposition, the Nurserymen saw it, liked it, and are now planning to display it.

In the use of these displays there are important implications for the Agriculture School because they can illustrate their work, for the Bankers and Nurserymen because they have access to educational material to display, and most of all, to the public because they profit from the knowledge they gain.
The Cornell Alumni Association, originally called the Associate Alumni of Cornell University, was organized in 1872 by representatives of the first four graduating classes. Their purpose, then as now, is “to promote in every proper way the interest of the University and to foster among the graduates a sentiment of regard for each other, and attachment to their Alma Mater.”

Hunt Bradley, the Association’s General Secretary, coordinates the organizations, activities, and publications the Alumni Association sponsors. Their function is to keep alive the spirit of unity and pride among Cornell University alumni. The number and diversity of these groups indicates the thorough job that is done. Cornell Clubs are found in 30 states, 10 foreign countries, and Puerto Rico. The Cornell Association of Class Secretaries publishes statistical information about members of each class. The Cornell Alumni News keeps alumni informed of Cornell activities. Graduates receive this magazine monthly for two years after graduation. The subscription is included in their matriculation fee. The Alumni News is self-supporting.

The Cornell University Council, which provides leadership for developing resources at the University, is composed of distinguished alumni. They work in many areas including advising the administration, cultivation of leadership, public relations, and fund raising. The Council desires strong assistance from alumni. Further, the alumni regularly elect two trustees to serve on the Cornell Board of Trustees for a five-year term. The Committee on Alumni Trustee Nominations assists them in the selection process.

A program that the Alumni Association sponsors which is especially popular is the Faculty Forum held during Reunion Weekend each June. The format is generally that of a lecture or panel discussion. A member of the Cornell faculty heads the program. Forums in the past have included: “The Great Gatsby and the American Dream,” by Arthur Mizener, Professor of English; “The Mirror Image of Soviet-American Relations,” by Uri Bronfenbrenner, Professor of Child Development and Family Relationships; and “Fundamental Particles,” by Hans Bethe, John Wendell Anderson Professor of Physics and Nuclear Studies. Attendance at these forums has generally consisted of approximately 1500 alumni.

An especially important activity of the Alumni Association is their Secondary Schools program. Operating as separate units in various communities, or in conjunction with local Cornell Clubs, they probe their area for prospective Cornellians. Alumni visit high schools to enlist the aid of guidance counselors and to interview likely candidates. Alumni also interview and evaluate students having applied for admission to Cornell University. Those who are accepted by the University are often feted by a local alumni group at a party or tea. Another facet of the Secondary Schools program is the selection of high school juniors to visit the University during Cornell Day held in early May.

Graduates are asked to assist the Association in three ways: 1) to inform friends and associates of the activities and achievements of Cornell, 2) to attract to Cornell the student who will most profit from the type of education offered here, and 3) to lend their financial support to the University.

The administration, in return, is obliged to maintain Cornell’s position of prestige and leadership, to keep its alumni fully informed of activities, achievements, and problems, and to permit the alumni to participate actively in University life.

During the annual reunion weekend in June, the Association holds its yearly meeting to hear reports of the year’s activities sponsored by the Alumni Association and the University. The Board of Directors of the Association hold meetings during the year to transact necessary business.

Cornell alumni, together with the undergraduates, are the best salesmen of our University. With their aid, Cornell, in this centennial year, has soared to its present position of power and prestige.
F. W. BENEWAY '14, RD 3, Ontario, N. Y., though in his eighties, is busy working on his 150 acre fruit farm. His four children are all Cornell graduates, with daughter, Mary, having graduated Phi Beta Kappa in Arts and Sciences. Mr. Beneway has been president of the New York and New England Apple Institute, and of the Western N. Y. Peach Association. He has also been a trustee of Cornell University for two years.

ROLAND F. BUCHNAM '14, 25 Parkwood St., Albany 8, N. Y., currently a consultant for the transit industry, did graduate work in Agricultural Economics. He worked for 23 years in the N. Y. Public Service Commission concerned with rural electrification and utility rates and for five years as a utility analyst consultant. Mr. Buchnam is a member and past president of the Cornell Club of Albany.

SAMUEL S. GOLDBERG '19, 369 West Hudson St., Long Beach, N. Y., retired March 1, 1964, after having worked 38 years as clerk in the New York State Supreme Court of Kings County. His son, Dr. Joseph Goldberg, graduated from Cornell in 1943.

E. EARL HARDING '20, Five Corners, Albion, N. Y., is presently farming fruit orchards on land his ancestors purchased from the Holland Land Company. Mr. Harding is president of the N. Y. S. Horticultural Society, past state director of the N. Y. S. Farm Bureau, and member of the town board of Gaines, N. Y.

FRANK W. TREVOR '36, Millbrook School for Boys, Millbrook, N. Y., is head of the Science Department at the school. He formerly taught marine biology at the Audubon Camp in Maine. Mr. Trevor spends summers redeveloping Mosquito Island, Maine, into a sheep island and marine station.

GEORGE C. COOK '40, 151 Hillside Rd., Farmingdale, N. Y., is chairman of the division of Food Processing Technology at the State Agricultural Institute in Farmingdale. He came to Farmingdale in 1947 to set up a Department of Frozen Foods at the Institute. Previously he had spent over 12 years as a high school teacher of agriculture and a short term in the food processing industry.

LEWELLYN S. MIX '44, Center Street, Cayuga, N. Y., is vice president and general manager of Beacon Feeds. Prior to 1961 he served Beacon Feeds as Director of Dairy Research and as a dairy specialist. He taught at the University of Minnesota for a year after completing his graduate work there.

ROBERT S. MONZEGLIO '48, Dayton Ave., Manorville, N.Y., teaches the second and third grades in a three room school house in Manorville. Mr. Monzeglio owned and operated a poultry farm until 1962.

FRANK J. WOLFF '53, Magee Road, Glenmont, N.Y., is presently serving as an associate to the Bureau of Agricultural Education in Albany. He is on leave from the teaching position at Northside High School, Corning, N.Y., where he is chairman of his department.

PHILIP T. GRAVIK '57, RD #2, Clymer, N.Y., works in partnership with his father on a dairy farm with a milking herd of 70 cows. He also sells farm equipment and farm bulk tanks in partnership with his uncle. Phil was a member of the Cornell Crew team in 1957.

DONALD E. HENRY '58, 928 Ridge Avenue, Pittsburgh, Pa., is assistant manager of the Pittsburgh office of the Creamery Package Manufacturing Company of Buffalo, N. Y. He began in sales and advanced to sales engineering before he became assistant manager.

FRANK W. KNIGHT, JR. '62, 873 Boston Post Road, Rye, N.Y., is a Director-Naturalist at the Rye Nature Center. He formerly worked in the same capacity at the Closter Nature Center. He is a Neighborhood Commissioner of the Boy Scouts of America and a member of the Association of Interpretive Naturalists.
Last year this man invested more than $100,000 dollars in your community.

Chances are you do not. However, you may run across him doing business around your town. Quite often he is the gentleman ahead of you in line at the bank; the one in the business suit that you thought was the head of a big corporation! At other times he is the guy in the soft felt hat and overalls browsing over the counter at the hardware store. You can also catch him talking to your insurance man, or to the salesman who sold you your new car.

In any event, once you get to know him you'll no doubt agree that he's a mighty handy guy to have around. Not only does he spend thousands of dollars each month in and around your town for such things as automobiles, hammers, and life insurance, but he sees to it that you and your family have a constant supply of fresh wholesome milk. He also supplies the raw material for the cheese, butter, and ice cream that add so much to your mealtime enjoyment.

Clearly this man is an important part of your community. Keeping him and others like him in business makes good sense. It is a safe, sure way of protecting the future of your country and your state.

***

No. 3 in a series from the New York State College of Agriculture, a contract college of the State University, at Cornell University, Ithaca, New York.
IN THIS ISSUE

Editorial ................................................................. 1
Comment ................................................................. 1
Letter to the Editor .................................................. 1
Prelude to Logical Thinking ....................................... 2
Who Pays for Progress? ............................................. 4
Exporters of Knowledge ............................................. 5
You Came Through My Appetite .................................. 6
A Nation of Debtors .................................................. 8
Spare the Rod? ......................................................... 9
Fresh Approach in Rural Sociology ............................... 10
Capsules .................................................................. 12
Alumni .................................................................. 13

Staff

Editors-in-Chief .......... Catherine Johanson '65 and Kenneth Balmas '65
Managing Editor ........................................................ Francine Grace '65
Circulation Manager .................................................. Kenneth Goldstein '64
Librarian ................................................................. Conan Mooney '66

Freshmen: Marsha C. Camp, Susan L. Cooper, Ica M. Kostrub, Kathy E. Lamoreaux, Greggory W. Morris, Brian N. Regrut, Jane M. Silvernail.


Juniors: Rita C. Allen, Manning Gasch, Margot G. Jensen, Rosley I. McFarlane, Candace L. Moore, Peter D. Tukey.

Seniors: Frank Fee, Robert Fistick, Toni A. Gailey, Susan E. Isler, John P. Lowens, Peter L. Monnier, Wade M. Nye, Renate Rabeler, Owen Wavrlinek, Rochelle Yedvab.

COVER—Julie Baxter, one of Dr. Henry Ricciuti’s subjects, concentrates on a problem in grouping. Photograph by George Lavris, Visual Aids Department, New York State College of Agriculture. See cover story on page 2.

Back page advertisement by Conan Mooney, '66

The Cornell Countryman is published monthly from October through May by the New York State College of Agriculture, 490 Roberts Hall, Cornell University, Ithaca, New York. Second-class postage paid at Ithaca, New York. Printing by Norton Printing Co. of Ithaca. Subscription rate is $1.75 a year or two years for $3.25; three years for $4.50; single copies, 25 cents. A member of Agriculture College Magazines Associated.
EDITORIAL

We are devoting this issue of the Cornell Countryman to research in the social sciences originating on the Cornell University campus. Our hope is to alert our readers to some of the recent findings. We believe that there is value in the thought they stimulate and the directions they clarify.

We wish to note, however, that much work remains in many of the projects discussed. Some answers have been found, but at the same time new questions are uncovered.

The ultimate value of research is dependent on funds and communication. Monies are needed for a study to go into sufficient depth. Only in this way can findings be adequately substantiated to be meaningful.

For research to be useful to the public the communication of new discoveries needs to be accurate and complete. At Cornell this is the job of the extension service. This issue of the Cornell Countryman can be considered as part of this effort.

Kenneth Balmas

COMMENT

In any consideration of the research aspect of the academic community, the question arises: Should a professor be required to publish?

At many schools, this requirement does exist. Readers are probably familiar with an incident that received national recognition last year. A Tufts University professor was dismissed from the faculty for failing to meet his “publishing requirement.”

We do not feel that any professor should be required to do work of this nature, especially if it interferes with his primary function—that of teaching. Please do not misunderstand our contention. We fully recognize the necessity of research and investigation in our technologically oriented society. It is a poor teacher indeed who is not constantly supplementing his lectures with current material and new theories. However our thought is that professors should not be pressured to publish.

In many cases the interest of a professor in his teaching and in his personal contact with his students is inhibited by his obligation to publish. An implication is: What happens to people who are interested in teaching on the undergraduate level for teaching’s sake?

Patty Robinson
Gene Goldenberg

LETTER TO THE EDITOR

Chaumont, New York
November 23, 1964

Editor, Cornell Countryman:

Your issue for November was very interesting. Mention of the Big Red team brings memories of watching some games from Dead Head Hill, and of some of the players whom I knew—a 160-pound center opposing one who weighed well over 200 pounds, a 145-pound quarterback—but those were not the days of Cornell’s finest teams.

The picture of the mud-rush brings memories of a different rush when 1908 gathered in the old Roberts barn, shivering until the signal was given to make the rush. Somewhere before nearing Cascadilla Bridge, they were met by superior forces and many captives were taken. These captives were taken to some hall, tied in their chairs, and kept until the banquet was over. I remember one boy with very slender bones who slipped his hands from the bonds; I believe he untied another and both escaped the guards.

Another memory must date to my short horn days—the 3 month course given for a few years—when many students were about the campus with their class numerals in black scars on their cheeks, painted with silver nitrate, I believe, by the Sophs. I do not know if “hazing” had gone out of style or had been forbidden, but I was never required to do anything embarrassing, not even sing the Alma Mater which I would have “mutilated.”

I have not been on campus since 1948, and was lost then.
How many 60 year subscribers do you have?
With best wishes for your next sixty years.
Sincerely,
Rolla Van Doren ’06

Note: We are sorry that we are unable to answer Mr. Van Doren’s question but records have not been kept. The Cornell Countryman was first published in 1904 and we would appreciate hearing from anyone else who has been with us that long. Ed.
When did you start thinking of similar objects as a group? This question has inspired the recent research of Dr. Henry N. Ricciuti, of the department of child development and family relationships in the College of Home Economics. Dr. Ricciuti has been studying infants of 12 to 24 months in an attempt to discover the early manifestations of the ability to impose order on a group of like objects. Cognitive organization, or the capacity to categorize like objects, is apparent even at a pre-verbal stage. Before the baby has learned the words for ball or rectangle, he can perceive differences of form, color, texture, and size and often responds to similarity in such stimuli. The nature of the responses varies with the age of the infant. Great differences are also observed even between two children of the same age and sex.

Of course, as language develops in the child, categorizing is facilitated. The child has a number of labels which he can apply to an object. He can form a precise mental image of a rigid, yellow cube and distinguish it readily from contrasting forms. Dr. Ricciuti hopes to retest his infant subjects at age three to see how language development improves the child's capacity for cognitive organization.

Dr. Ricciuti first became interested in the problem when he was working with four and five year old children. He found that the child's increased mental capacity for reflection at this age produced some complications. Verbal instructions from the experimenter often confused the youngster. He might fail to group objects in a sorting task in response to instructions. It was frequently observed, however, that some children who failed to group in these simple manipulative tasks, often categorized the objects spontaneously when the experimenter simply asked them to put the things away at the close of the test. Instructions which seemed clear to the adult, such as, "Just put these things together," obviously did not evoke the expected response in the child. The child reflected on the nature of the task and had difficulty in interpreting the experimenter's request. Dr. Ricciuti found that a combination of pantomime with verbal directions greatly increased the child's comprehension of the task involved and facilitated child-adult understanding.

Additional work with younger children, including infants as young as 12 months, revealed that when dissimilar objects were presented without specific instructions (as simple toys) the infants often imposed some sort of order on the group. This behavior seemed to indicate some degree of the development of cognitive organization, though at a primitive, pre-verbal level.

Dr. Ricciuti then conceived of a study of infants from 12 to 24 months, employing the child's spon-
taneous reaction to simple objects in a manipulative sorting task. This experiment proved fruitful in acquiring an understanding of what might be the forerunner or earliest stage in development of powers of logical thinking and cognitive organization which play a dynamic role in the conceptual thinking of the adult.

Dr. Ricciuti and his assistants observed 48 children in the course of the study. The subjects varied in age from 12 to 24 months, the group being composed equally of boys and girls. The children were drawn mainly from white, middle class backgrounds. Newspaper birth lists served as a source of subjects. Parents were contacted and their children's cooperation in the experiment was requested.

Under test conditions, the infant was placed in a baby tenda in front of a table on which were placed four objects of one type and an equal number of contrasting ones. The mother remained with the child, but was requested not to assist the child with any verbal clues but only to coax the child to play with the objects. Observers sat behind a one-way mirror to record their observations. In this manner, the infant was unaware of their presence. One experimenter remained with the infant to set up the test objects for the various tasks.

Dr. Ricciuti's assistant, Mrs. Linda J. Johnson, played a key role in this phase of the studies. Largely through her efforts, a coding system was evolved which greatly facilitated recording data pertinent to the child's responses.

The child was observed during a two and one half minute interval. If he became disinterested or failed to group the objects, they were rearranged and he could begin anew.

It was not known, at the outset, how active the children's spontaneous grouping response would be. For this reason, a table was used which had two identical recessed cups. Each of these was sufficiently large to hold all of the objects presented to the child. It was thought this might encourage the infant in sorting and ordering the objects.

The experimenters soon observed that the child need not sort the different objects into distinct groups to indicate cognitively guided manipulation. As the data indicate, the child who fails to group objects may pick up or merely touch two or more similar objects in quick succession. The child might also arrange the objects in incomplete or partially correct groupings.

A number of different grouping tasks were presented to the child. Each test involved two groups of four similar objects. In some cases the children lost interest quickly, while at other times they grew absorbed. In general, where the two groups of objects differed greatly, the children maintained a higher level of interest in the task.

One set of test objects which seemed to evoke a high degree of spatial grouping and successive manipulation consisted of four rigid yellow cubes and four malleable clay balls. The children enjoyed pinching the balls, which yielded under pressure and changed shape slightly. This test was termed a multiple-contrast task. Here the two sets of objects differ as to color, form, and texture.

Lower scores were obtained for tests which employed only slightly differing objects. One task used four identical parallelograms and four identical ellipses cut out of masonite board. The two groups of objects were yellow and roughly the same size, so they differed only in contour. This sorting task prompted almost no response in the infants. In fact, only 12 per cent of all the children tested showed any indication of selective ordering.

In some cases the child will become fascinated with one of the objects and ignore the sorting task entirely. In a test involving four rigid cubes and four spongy ones, a little girl started chewing bits out of the soft cubes. Dr. Ricciuti has a large stock of test objects to compensate for this occupational hazard.

Dr. Ricciuti observed significant increases in selective ordering with increase in age. In general, selective ordering appeared more frequently than did object grouping. In evaluating his data obtained in the experiment, Dr. Ricciuti found no significant difference in the test scores due to sex or the sequence in which the various tests were presented to the infant.

Dr. Ricciuti's subjects were drawn primarily from financially secure, middle class families. He feels that the child's general background and previous opportunity to use his hands and manipulate a variety of toys might influence his scores on the tests. Miss Lois Brockman, a graduate student working under the guidance of Professor Ricciuti, is now in Lima, Peru, gathering data for her thesis. She is studying severely undernourished children in Lima. Miss Brockman is extending Professor Ricciuti's study by investigation of the effect of malnutrition on mental development. She is using a group of normal Peruvian youngsters as a control group.

Dr. Ricciuti has concluded, from the evidence gained in his research, that the behavior instigated in the infants due to the stimulus of the test objects, represents a precursor of the capacity of cognitive organization exhibited in older children and adults. His investigations revealed the early manifestation of capabilities which develop steadily in the child and blossom in the adult. The rudimentary, preverbal grouping response of the infant leads progressively to the adult capacity for symbolic, logical thinking.
Who Pays For Progress?

by Jerryanne Taber '67

Today's world is emphasizing progress in the form of scientific discoveries and improvements. Cornell's Colleges of Agriculture and Home Economics have succeeded in keeping foot with the increasing pace of progress by means of ample and extensive research. The Colleges' basic research programs have been expanded to accumulate a backlog of fundamental knowledge that will function as a sounding board for solutions to problems in the coming years.

The expansion of research can be accomplished only if adequate funds are made available. Both the intensity of projects and the cost of carrying them out are increasing rapidly. The latter is accounted for by higher salary levels of scientists, increased costs of supplies and equipment, and a greater demand for non-professional help and more capable laboratory technicians and personnel. Where does the money come from which has allowed the Colleges' research programs to meet the demands of rising costs and greater amounts?

According to the Hatch Act, federal legislation enacted in 1887, federal monies were to be granted to the states for the establishment of experiment stations, which were developed, for the most part, at land grant colleges. The research projects with which the College of Agriculture is identified are encompassed under the heading of Cornell University Agricultural Experiment Stations.

In order to facilitate efficient organization and administration, most of Cornell's agricultural research is classified under these stations whether funds are provided by state, local, or private sources. Although the stations are primarily publicly supported, their funds are augmented by grants and regular funds from farm and commercial organizations. The state is the most important contributing force. It assumes over 60 per cent of the total funds for research. Although this percentage is somewhat lower than the 81 per cent supplied in 1953-54, funds have gone from nearly three million dollars in these years to almost six million dollars in 1963-64. The usual procedure for securing state funds requires the college administrators to present their budgets to their respective state legislative and executive branches for approval.

Over the past few years funds under the Hatch Act have accounted for an average of 10 per cent of the total research budget. Of the remaining 30 per cent from non-direct appropriations, 20 per cent came from other federal sources such as the National Institute of Health, the National Science Foundation, and the Atomic Energy Commission. Accounting for the remainder of sources are trade associations and corporations such as Proctor and Gamble Company or Sun Oil Company along with foundations and individuals, exemplified by the Population Council of the Rockefeller Institute.

The greatest portion of this last 30 per cent is awarded to the individual scientist or team of scientists on a competitive basis. Such grants are normally effective for a short span of time, perhaps two to five years. Extension of their support depends on the amount of significant progress made and upon the continuing program of project submission. It is the role of the administration in these instances to "open the doors" to the individual. They encourage project submission and review and approve projects prior to submission. It is only through the coordinated effort of administration and the individual scientist that these grants can be achieved.

Statistics compiled over the past 15 years indicate that direct appropriations are accounting for an increasingly large amount of the total research budget. According to Director of Research Dr. Keith Kennedy, it is the role of new organizations to "utilize to the full capabilities what the state has already provided." He also indicated that the gradual shift of emphasis from direct appropriation is likely to continue under prevailing economic conditions and policies. The state is under increasing pressure to meet growing educational demands and must utilize its resources in maintaining competitive salaries and in meeting rising costs. The federal government will probably continue to make funds available through its grant agencies rather than through the United States Department of Agriculture, thus lowering the rate of increase in Hatch Funds.

Currently, Cornell ranks second among state colleges in the amount of its research budget. As the Cornell Experiment Stations expand, it seems that this position will be maintained. To meet the growing needs, the state and federal governments, along with private corporations and foundations will most probably continue to make adequate funds available. This would enable Cornell to devote minds and resources to the stream of progress.
The research programs of Cornell University encompass many fields of knowledge and inquiry. An important question arising from research conclusions is, "How is the information relayed and made useful to the individual citizen?"

Cornell University answers this question by utilizing both classroom instruction and a cooperative extension service in New York State. Through these two types of educational situations, people are informed of the practical applications and the importance of research findings. According to Mr. A. A. Johnson, Director of Extension, we can look at research at Cornell as a "knowledge center" for teaching, both in the classroom and in the field.

Research, of course, has its most direct connection with classroom instruction through the University staff. Mr. Johnson feels that the best teachers also do some research, so that the newest methods and ideas are infused into the curriculum. The subject matter presented in the classroom must always be abreast of the findings of the researchers otherwise education becomes stagnant.

Resident instruction is also one of the easiest methods of disseminating research information and new knowledge. Not only is there a ready-made and willing audience, but there are also facilities available to make the demonstration of the new principles relatively simple. There is, too, a close connection between the researcher and the student audience in the classroom. We can see, then, that research and education support one another and must be considered an entity.

The New York State Cooperative Extension Service is useful as a means of instruction in research findings. One of the major purposes of the Cooperative Extension Service is to "aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage the application of the same." To fulfill this purpose, 56 County Extension Service Associtions, under Cornell's administration, instruct New York State residents in the important applications of new research findings.

The impact of educational programs, such as the extension program, has been tremendous. Says Mr. Johnson: "In New York State today, one fourth as many farmers, using one half as much land, are producing one third more products than in 1900. This kind of production progress is the result of technical development growing out of research and education." But, if this kind of progress and efficiency is to continue, farmers must be supplied with technical knowledge and information from research to keep them in a competitive position. The apple industry in New York State demonstrates one example of the direct application of research. Commercial yields are four times as large today as they were 30 years ago. Important factors responsible for this increase are better understanding of nutritional problems and more efficient methods of spraying developed through research and testing.

The Extension Service also deals with instruction in the important area of home economics. For example, a survey undertaken three years ago by the Service studied and coordinated information on the uses of government-donated foods for lower income families. Currently, extension agents in 40 of the 46 counties participating in the donated-food program have educational programs in cooperation with county welfare commissioners and other agencies working with surplus-food recipients.

These examples of work in the Extension program point out the importance of this form of instruction. Extension education, like classroom lectures, can be a valuable source of information regarding many topics. New knowledge and technology is useful to many segments of the general audience which is reached by the Cooperative Extension Service.

Mr. Johnson states that the extension concept is one of the most exportable concepts we have. This belief is evidenced by the success of the International Agriculture Program. Here, too, the principle of bringing research and new technology to the people is in use. The key factor, as with adult and student teaching, is to increase understanding.

We have seen, briefly, the application of research to education. The interrelationship is perhaps best demonstrated if we think of each area such as research, resident instruction, extension, and international agriculture as an arm of education, all cooperating to present new knowledge for better living.
"You came through my appetite is that game since he lives in school is jumping and wanted help call him well and substance was a piano is a mistake on this is warm glow in and girl went to write."

The foregoing may sound like a lot of nonsense, but actually it is an important element of a research project which is pointing toward some significant conclusions. Perhaps you have sometimes wondered how people are able to talk as fast as they do without making a conscious effort or becoming confused; or how people can comprehend the spoken or written word at the rate that they do. These were the questions which confronted Dr. George J. Suci, associate professor of child development and family relationships in the College of Home Economics at Cornell University, when he began his research.

Previous study has indicated that people may employ an involved code system as the basis of their speech and comprehension. It has been assumed that the word is not the fundamental unit of language. Instead, language may be processed in groups of words. This seems to be a logical conclusion, since people probably could not speak or read rapidly if they comprehended or spoke on a word-to-word basis.

Similarly, it has been assumed that verbal material is remembered in such groups or units. Storage capacity in the brain is limited. If items of knowledge were stored in individual words, it is likely that our learning capacity would be severely restricted.

The assumed existence of units of language implies that the relationship between certain words is stronger within a group than between groups, i.e. a cohesiveness exists between the words in a group which makes it difficult to separate those words from their group. The flow of language is more likely to be broken between groups than within groups. Previous study has indicated the possibility that a pause in speech serves as a division between units.

Utilizing these assumptions, Dr. Suci hypothesized that "groups of elements which are segregated by a pause in speech resist fracturing." A series of experiments was conducted to test the validity of this hypothesis. Experiments consisted of learning and recalling material which was lengthy enough to necessitate the subject's breaking it up into units.

The subjects of the experiments were female freshmen and sophomores at Cornell. In the first experiment, each subject was exposed to one or two taped stories, such as the following:

"One day while a small freckled boy named Michael was playing Indian in his backyard he found a large ragged carpet by a garbage can and spread it out carefully and lay down on it. All at once the old ragged carpet began to rise into the air."

The subject's task was to learn the material well enough to repeat it verbatim, the learning criterion being two consecutive correct trials. During every trial the subject's output was taped. A lapse of a week between sessions was necessary in order to allow the experimenter time to determine the pauses in the subject's response material. At the second session, the subject was required to recall the story she had learned during the first session. If she was unable to do so, the stimulus material was played once and she was told to repeat it. This process continued until she could repeat the material once verbatim.

The subject was then asked to learn a fractured version of the original material. These versions were of two types: pause and non-pause. In the pause type, the story was divided according to the subject's pauses. The groups of words which were separated by pauses were placed in random order. In the non-pause condition the material was divided into groups of words at a point approximately halfway between pauses. These groups too were placed in random order.

If Dr. Suci's hypotheses were correct, it should have been easier for the subjects to learn the pause material than the non-pause material.

In each case, the hypothesis was supported. The subjects learned the pause material much more quickly than the non-pause material.
Considerable frustration on the part of the subject was noticed when she attempted to learn the non-pause material. The results indicate that it is extremely difficult to reorganize the structure of verbal material once a particular sequence of this material is learned.

At this point, Dr. Suci was faced with one difficulty: pauses were very likely to occur at the ends of phrases. Although this relationship was not perfect, it implied that perhaps syntax was the basis for the creation of units of language. In order to discover the actual significance of pauses as the basis for language unit formation, Dr. Suci conducted another experiment in which the stimulus material was organized with a minimum of syntax.

The second experiment used lists of words other than stories as stimulus material. The words on the list had some syntactical relation, but as a whole were meaningless. They were arranged in such an order that the subjects could find little or no indication as to where to pause. Each word in the list might have been used in everyday speech with the word that came before; but it might also have been used with the word following. Consequently, the pause patterns had to appear on a strictly personal basis.

A typical example of these lists appeared at the beginning of this article. In the first experiment of this series the subject learned two lists of the same length and difficulty. The criterion of learning was two to four consecutive correct trials. The procedure followed was similar to that in the first set of experiments. In the first experiment of this type, the lists were mutilated according to pause and non-pause conditions. Again, the pause material was easier to learn than the non-pause material, clearly supporting Dr. Suci's hypothesis.

In the second experiment the pause list was maintained as before, but the non-pause list was mutilated in a different way. The list was fractured according to another subject's pauses. Thus, the non-pause material for one subject was the pause material for another subject. Again the results favored Dr. Suci's hypothesis.

The results of these experiments, then, seem to indicate that pause is indeed significant as a marker of units in language.

Dr. Suci's findings may be very important, particularly in the area of teaching children to read. The teaching technique currently in use is that of teaching a child to associate single spoken words with single written words. Although experiments have not as yet been performed with children, it can be assumed that they, like adults, learn by units rather than by individual words. A child, by the time he reaches school age, is already able to communicate clearly.

Although he may make certain grammatical errors, such as using singular nouns with plural verbs, he never makes the error of saying "The go" or "the And." The child seems to know that certain words go together and others do not. Assuming, then, that children assimilate knowledge in units of language, it would seem that they could learn to read more easily if the material were presented in units longer than single words. Each child's individual pattern of forming units of language should be known before attempting to teach the child to read.

Although there is much more to explore in the area of cognition, Dr. Suci is mainly interested in learning how units are coded and stored in the brain. Aided by Mary Sue Hershey and Paul Ammon, he intends to have graduate assistants continue his testing with adults, but also to begin testing children, and will compare the results. With children, he will have to change his methods of testing, since most would be too young to respond to the methods used with adults.

Whatever the methods, much remains to be discovered in the area of cognitive thinking and its applications to various areas of teaching and learning.

---

**GRAMMATICAL UNITS**

"One day while a large fat woman called Bertha was climbing up a long hill in her neighborhood, she saw a brand new car parked by the curb and opened the back door and sat in it. Suddenly the shiny new car began to roll down the hill."

**NON-GRAMMATICAL UNITS**

day while a large fat woman called Bertha was climbing up a long hill in her neighborhood she saw a brand new car parked by the curb and opened the back door and sat in it. Suddenly the shiny new car began to roll down the hill one."
The Federal Reserve Consumer Credit Division is engaged in a research project studying the quality of consumer credit. In particular they are looking at characteristics of borrowers which seem to affect their ability to repay.

Prof. Gwen Bymers, of the department of household economics and management in the College of Home Economics at Cornell, is conducting parallel research. She has reactivated a study begun in the summer of 1961 dealing with credit in relation to households and its bearing on their financial management.

American households are more in debt today than ever before. Mortgage debt, installment debt, and short term non-installment debt have all been rising, as has the non-business bankruptcy rate. Statistics in the October 19, 1964 issue of U.S. News and World Report reveal the acuteness of the problem. “People at year end will owe $63.5 billion dollars. Ten years earlier they owed 104.4 billion.”

Concern, especially over installment debt, has prompted investigations into the use of credit by agencies in the federal government and by research personnel in colleges and universities around the country.

Studies have uncovered some facts about the debt situation in American homes. About one out of every two households have some installment debt. Upper-middle income level households are the most likely to have installment debt. In the $6,000-$7,500 income class of 1958, 63 per cent had this kind of debt. Young households have more installment debt than older households. In 1958, 70 per cent of the households with heads between 18 and 34 years old had installment debt.

Miss Bymers, in studying households using consumer credit, has devised criteria for classifying them according to their evident “vulnerability” to a financial setback, such as an unexpected layoff or illness.

Vulnerability status is determined by the length of time the household is involved in repayment, its liquid asset position, and the amount of its income committed to debt repayment. Thus if a household is committed to repayment at current rate for more than one year and if it has less than $200 of liquid assets (cash available to meet emergencies) it is considered “vulnerable.” If, in addition, its installment debt repayments take 20 per cent or more of its income after taxes, it is considered “very vulnerable.”

Reporting the findings of her studies, Miss Bymers said, “On the basis of data from the initial study in 1959, only roughly one tenth of all spending units fell into a vulnerable category. I am now involved in looking at data compiled since then—to see whether or not there has been a change in the percentage of households which can be classified as vulnerable to financial setback.”

A family can assess its current financial position using Miss Bymers’ system, and accordingly plan its purchases and loans. In Home Economics Extension Leaflet 21, “A Financial Checkup on the Use of Credit,” Miss Bymers explains the implications of her work for the family situation. She states that sound family financial management may include the use of installment credit, but she suggests that the family ask itself the following questions when considering an installment commitment:

1. Is having the item (or money) now rather than later worth the dollar and cents cost of installment credit?
2. Is there a less expensive place to borrow?
3. How much of my income after taxes is already committed?
4. Finally, what will the proposed purchase or loan do to my ‘vulnerability’ score?”

Studies of consumer credit like these of Miss Bymers at Cornell and that of the federal government, and the application of their findings to family financial management, may indeed lead to effective controls of the rising American household debt.
SPARE THE ROD...?

by Joan Solomon '67

The time of the stern parent figure with the sting
ning strap and the sharp temper has given way in the
face of revolutionary developments. "Permissiveness" has replaced "severity" as the watchword of child guid-
ance literature. The parent's role is to support, not to restrain; to guide, not to command; to "love 'em up" not to "beat 'em up."

But there are dissenters even to this seemingly ideal plan. There are those who asked for data to show that this method really works. Dr. Edward C. Devereux Jr., in collaboration with Dr. Urie Bronfenbren-
er and Dr. George J. Suci, took upon himself the task of finding out.

While visiting Germany in 1957, Dr. Devereux was struck by the cross-cultural differences in parental author-
ity patterns. The father was the main figure of discipline. The children were taught to obey him unquestioningly. They were obedient children, but, Dr. Devereux questions, "Was this at the cost of personal development and auton-
omy?" Dr. Devereux returned to America bent on finding out just how parental behavior affects the child's de-
velopment.

Professors Devereux, Bronfenbrenner and Suci began a long series of studies which they are still in the midst of today. The first group they dealt with was a sample of 400 15 year-olds from Ithaca High
School. Each child was asked 100 specific questions about what each parent did. Some samples are: do they "push me to do well in school," do they "comfort me," do they "reason with me." The researchers, also interested in parental authority differentiation, asked the children which parent has the final say on various family matters. Ithaca families were thus di-
vided into those that are father-dominant or patri-
archal, those that are egalitarian, and those that are mother-dominant or matriarchal. In both patriarchal and matriarchal families more discipline is meted out than in the egalitarian ones which are typically per-
missive and democratic. The children were then rated
by their English teachers and guidance personnel on such dimensions as responsibility and leadership ability.
The researchers were in for quite a surprise!

At first everything went as predicted. The children from the egalitarian families proved to be more out-
going, more spontaneous, and better adjusted. Yet, different from every expectation, they were also shown to be more childish, more anxious, and low in school achievement. Though children from the matriarchal homes were submissive, and those from patriarchal homes were selfish and hostile, they both had more drive and were much higher achievers. Dr. Devereux began to wonder if the highly permissive way of bringing up a child was creating undesirable by-products. He states, "When you play a child out on a very loose string, you have to expect a great deal of wobble for a while. But hopefully the child eventually learns to stand on his own two feet."

To test their findings in a field where there is a wider range of variations in authority types, the re-
searchers conducted a study in Ger-
many on 1400 youngsters. This time they chose 11 and 12 year-olds because they felt that these children are still close to the home and not yet greatly influenced by peer pressure. They used essentially the same methods except for one improvement. In addition to teacher ratings they had the students rate each other to get a more accurate picture of their behavior. It was found that boys from the high-permissive egalitarian families were low on responsi-
bility and school achievement. Boys from homes characterized by either extremes of patriarchy or matriarchy were rated as selfish, dependent and incom-
petent. Between these extremes of too much permissiveness or too much discipline came the intermediate patricentric and matricentric types in which the children experienced an "optimum combi-
ation of both discipline and support." Boys in these families were rated as high on responsibility and school achievement.

According to Dr. Devereux, the question is not
whether to be permissive or controlling, but rather of being both in moderation. With virtually every par-
tent practice studied, there appeared to be an optimum level. Too much nurturance will create problems in the child, as will under-indulgence, too much consis-
tency, and too little scolding. Excessive spanking will have bad effects on responsibility and emotional se-
curity, but so will too little spanking.

The studies cited above are inconclusive. Pro-
fessors Devereux, Bronfenbrenner, and Suci have ex-
tended their investigations to England and Switzerland, and hopefully will continue them in the U.S.S.R., Japan, and Israel. If the same results keep pouring in, the baby experts of today may have to start changing their tone and heed Dr. Devereux's advice:

"My plea . . . is that we move ahead to a new middle ground which will combine ample, but not smothering levels of love and understanding with ample, but not crippling levels of discipline and con-
trol."
Fresh Approach
In Rural Sociology

by Gene Goldenberg '67

To scores of the unknowing, the phrase “rural sociology” awakens images of diligent workers beating about the countryside frantically counting the cows and studiously observing the social practices of the local agricultural workers. This impression could not be farther from the truth. Besides offering over 25 courses ranging from “General Sociology” to “Applications of Social Theory,” the individual members of the department of rural sociology at Cornell are engaged in extensive research. There is a great spectrum of projects from a study labeled “Socio-Cultural Variables Associated with Changes in the Attitudes and Opinions of College Students” to research into the use of aerial photography as a method of determining the social complexity of communities.

It is possible, however, to pinpoint a trend in the research projects. The present emphasis seems to favor investigation of the changing social structures of community and inter-community units. The latter is the particular concern of Associate Professor Frank W. Young who is involved in a study of intervillage systems. The project, sponsored by the National Science Foundation and called “A Cooperative Cross-Cultural Study of Intervillage Systems,” is designed to find methods for training field workers to study intervillage systems all over the world. Sociologists feel that much social change takes place in this larger inter-community, and this study is primarily concerned with the “relative centrality, differentiation, and solidarity” of the intervillage unit. In order to determine these characteristics, the field workers (trained graduate students working abroad) will analyze such interactions as the marketing system which exists between a group of villages. By compiling and correlating the reports of these workers, Dr. Young hopes to be able to form a world-wide view of the aspects of the peasant community.

Extremely fascinating to the layman is another of Dr. Young's projects in which he is using aerial photography to study a sample of small communities in New York State. The research, still in its infant stages according to Dr. Young, is designed to find methods for determining the social complexity and make-up of a community from the air. The researchers plan to develop a fast, cheap, easy way of sociologically surveying underdeveloped countries. The basic premise involved here is that “the buildings are indices of the social organization of the people.”

In the area of community studies, Associate Professor John Harp is engaged in a comparative survey emphasizing voluntary civic and fraternal organizations. By observing and introducing changes in these various groups, Dr. Harp hopes to be able to analyze their effect on social change in the community.

Most of the professors are engaged in more than one research project. Assistant Professor Robert L. Carroll is no exception to this rule. He is at present working on three different projects on the national, state, and local levels respectively with similar considerations running through all of them. The first is a national study of migration in metropolitan areas. It is aimed at determining both the rate of migration and the average cost of change in these cities. Results here can have economic and sociological applications at the national level.

On the state level, Dr. Carroll has been compiling a community sampling list. He has listed every community center in New York State and classified them according to such features as population size, number and types of business enterprise, and distance from metropolitan centers. This listing serves two important purposes. First, other researchers may use it to draw samples for their own projects based on the variables in their study. The “Old Guard” sociologists would...
Aerial photographs such as the one above are being used by Professor Frank W. Young and his colleagues in determining the social complexity of rural communities.

study one community which they considered "typical." However, no specific case is completely typical. Using Professor Carroll's study, a researcher can select a well-stratified sampling of communities. The resultant generalizations about all communities are therefore far more accurate than those drawn from the study of one community. Second, a study of the regional development from intercommunity relationships is facilitated by such a listing. It is interesting to note that Dr. Carroll's listing has already been used by two other professors and two candidates for master's degrees.

On the local level, Dr. Carroll is participating in a joint project involving both the agricultural economics department and the rural sociology department. This team is conducting a study of the social and economic implications of town planning. The township of Southhold, on Long Island, is the object of everyone's attention, and the first job has been to determine the economic and sociological structure of the community through a number of surveys. The Cornell team will then give this analysis to a town planning firm to help in the job of working out a future plan of development for Southhold. The planning project will be followed closely by the researchers who will study and analyze its effects on the life of the community.

All of this research has one basic element in common—a need for lots and lots of money. The Southhold project is being financed through state and local funds. Foundations and private estates also contribute large amounts. For example, the estate of Louis J. Tabor, a former master of the National Grange, recently granted over $54,000 to the College of Agriculture for research in rural sociology. However, the Hatch Act probably contributes the greatest proportion of funds necessary for research. In 1963 alone, over 60 per cent of the projects in rural sociology were financed by funds allotted by the legislation.

Of special interest to Cornellians is an extended survey of student life and attitudes at Cornell being conducted by Professor Philip Taetz and Associate Professor John Harp. As outlined in their report, the study, begun in 1962, seeks to investigate the following points: 1) "The relationship between the academic social system and the expectations, attitudes, and opinions . . . of rural and urban students; and 2) To what extent changes in the opinions and attitudes of students are influenced by various aspects of the academic structure . . . and . . . by the socio-cultural and personal characteristics of the student."

The original sample group, which filled out questionnaires in December of 1962, consisted of 50 per cent of the male freshmen, sophomores, juniors, and seniors of the Colleges of Agriculture, Arts and Sciences, and Engineering. The preliminary tabulation of data from the questionnaires tends to answer the first point of investigation with revealing results. For example, 87.4 per cent of the students reported that they have never copyed on a prelim or final, while 27.6 per cent of the students reported copying on a term paper or assignment. Dr. Harp says that the second part of the survey is a planned "follow-up" study this spring consisting of interviews with the same students who filled out the original questionnaires. (This group will only include the freshmen and sophomores of the original sample group, since the juniors and seniors have graduated.) The results of this survey should be of great interest to every student at Cornell.
Bee stings account for more deaths in the U. S. than do snake bites. Professors Robert L. Patton and Allen W. Benton of Cornell University have shown that bee venom is equally as toxic as cobra venom in their testing with mice. The bee injects smaller amounts of venom and does so on the skin surface rather than in the blood stream.

These entomologists have also discovered bands of protein in bee venom which act something like inoculations in reverse. Excessive susceptibility to a reaction of a second sting is caused by the first. This indicates that people who are hypersensitive to bee stings are those individuals who are already carrying in their blood stream a certain protein band from a previous sting. To date, Benton has found by electrical means, eight different bands of protein.

An all out effort to educate the people of New York State in the proper use of insecticides has been undertaken by the New York State Cooperative Extension Service at Cornell University. All knowledge of pesticides and chemicals will be coordinated and rapidly dispersed throughout the state.

The new and far-reaching program will involve informational and educational activities to expand the understanding of farmers, custom pesticide applicators, and professionals and technicians in the pesticide field. It will also include recommendations issued on pest control for home gardeners and householders, and information will ultimately be spread to the general public.

Professor Harrington, associate director of Extension, New York State College of Agriculture, indicates that data on the safe and economical use of pesticides, along with the great benefit they have brought to mankind and their dangers to human health and natural resources will be made available to everyone.

Professor James E. Dewey, Cornell entomologist, as leader of the program will be responsible for the establishment of communications and working relations among departments at Cornell involved in pesticide work.

TV films special service letters to commercial agriculture producers, pesticide manuals for retailers, special meetings and courses, and brochures and posters aimed at safe use of chemicals are all methods under consideration for meeting the program’s objectives.

“Let’s get to know our college!” are the words boldly written across the face of “The Echo.” Edited by Priscilla Box, ’66, “The Echo” is the newsletter of the College of Home Economics. Its stated purpose is “to inform you of the activities of the organization in the College.” At the head of the November, 1964, issue is an article introducing Miss Jean Failing, Coordinator of Resident Teaching at the College. Other articles tell of the Resident Education Policies Committee, the centennial activities within the College, and a conference for high school guidance counselors sponsored by the College of Home Economics.

Charles D. Chupp, professor emeritus of plant pathology at Cornell University, has received an Award of Merit recognizing his “many contributions to the understanding of control of plant diseases.” He is a past president of the American Phytopathological Society and has received a Distinguished Service Award from the U. S. Department of Agriculture. He is author of more than 100 technical bulletins on plant diseases.

Mrs. Elizabeth V. Massett, associate agent in Onondaga County, and Mrs. Anna R. Verbeck, associate agent in Niagara County, received Distinguished Service Awards at the National Home Demonstration Agent’s Association Convention held in Washington, D.C., Nov. 15-18. Mrs. Marjorie W. White, assistant agent in Cayuga County, was presented a Florence Hall Award at the same convention.

Mrs. Massett was cited for the quality of the food and nutrition program she has carried on in Onondaga County. Mrs. Verbeck was cited for her skill in adopting Extension home economics program activities to fit people of diversified backgrounds. Mrs. White, who has been a home demonstration agent since 1959, was recognized for her part in the farm and home management program sponsored cooperatively by the home demonstration department and agricultural department of the Cayuga County Extension Service.
RAYMOND ALBRECHTSON, '30, Morrison Hall, Ithaca, N.Y., has been a member of the Animal Husbandry Extension Staff since 1937, and Department Extension Leader since 1958. He is director and chairman of the extension section of the American Dairy Science Association and a member of Epsilon Sigma Phi, Acacia, Dairymen's League, Grange, and Masons. In 1955 Mr. Albrectson received a Superior Service Award of the USDA and, in 1959, the De Laval Extension Dairyman Award.

CHARLES G. ASHE, '35, 215 Mott Road, Fayetteville, N.Y., was recently appointed Northeast Regional Sales Manager for Fiber Products Division of the Kendall Company in Walpole, Massachusetts. He was a former employee of the Merchants Refrigerating Company, Buffalo N.Y. and of Johnson and Johnson, Chicago, Illinois. Mr. Ashe is a member of the Cornell Club of Syracuse, N.Y. and is secretary of the Boy Scout Troop Commission in Fayetteville.

MRS. VIRGIL E. PHELPS '43, 1854 Ledge Road, Basom, N.Y., was a 4-H Club Agent for two years before becoming a homemaker. She is currently president of the PTA, chairman of the Farm Bureau directory committee, and is active in Extension work as a 4-H Club leader, project leader for Home Demonstration, and a member of the 4-H Homemaking Advisory Committee.

ALFRED H. RICHLey, '44, South Lake Road, Corfu, N.Y., is presently developing a shade and ornamental tree nursery on Lake Road, in Corfu. After serving in World War II, Mr. Richley became nurseryman and landscape supervisor for Land O' Trees Nursery in Williamsville, N.Y.

JOHN H. TALMAGE, '52, 36 Sound Avenue, Riverhead, Long Island, N.Y. is serving on the Executive Committee of the Suffolk County Extension Service, the Advisory Committee of the New York State Foundation Potato Seed Farm, and is director of the Empire State Potato Club and the Long Island Produce and Fertilizer Co., Inc. Since serving two years in the U.S. Army, he has been the manager of the H. R. Talmage and Son family farm partnership, which grows 200 acres of potatoes and half an acre of greenhouse tomatoes.

MORTON ADAMS, '33, (right) is congratulated and commended by Dean Charles E. Palm for his five years of leadership as chairman of the College of Agriculture Council. On Friday, November 20, Dean Palm presented him with a hand-lettered plaque which reads:

"MORTON ADAMS, in recognition of your outstanding leadership in modern agriculture, and your unsselfish devotion to your Alma Mater, we extend to you our sincere thanks for capable direction and the work of the Council for the College of Agriculture and the Agricultural Experiment Stations, during the period July 1, 1959 through June 30, 1964.

This presentation is made with the deep appreciation of the faculty and administration of the College of Agriculture at Cornell University."

November 20, 1964
Charles E. Palm, Dean

ANTON F. TEWES, '57, 755 S. Broadway, Lombard, Ill., is currently attending evening classes at Northwestern University Graduate School of Business to qualify for his M.B.A. After serving a short term in the U.S. Army, he was employed by Loblaw's, Inc. in Buffalo, N.Y. At the present time, Mr. Tewes is working for the American Cyanamid Co.

JOEL H. SHAFER, '60, 83-45 Broadway, Elmhurst 73, N.Y., became the Assistant Director of Personnel for Restaurant Association, Inc. in New York City after his graduation from Cornell. Early in 1963, he became the Director of Personnel and the Assistant Manager for Tavern on the Green Restaurant in Central Park in New York City.

WAYNE F. KELDER, '62, Accord, N.Y., has been the manager of a registered purebred Holstein dairy herd since his graduation. He is a member of the Farm Bureau, the leader of the dairy division of the Ulster County 4-H Club, and a member of the U.S.A. Holstein Club. He is also the recording secretary of the Volunteer Firemen.
Thirty-two years ago the Republican party rallied to the cry "A chicken in every pot." Today that dream is a reality, thanks to the resourcefulness of our American poultrymen.

From the small flocks of the 1930's which seldom exceeded one to two thousand birds, we have progressed to the stage where we can boast of having 14 producers in New York alone who have a million and a half hens. This is enough meat to supply a city of 50,000 with chicken, once a day, every day for an entire month. And, this is only 1/6 of all the hens in the State.

In 1963, the average American consumed a record high 30.9 pounds of chicken, plus 6.7 pounds of turkey, and some 314 eggs. The figures for 1964 are expected to be even higher.

Increased efficiency in the production of eggs and poultry products is just one of the great success stories that are so much a part of our American Agriculture.
IN THIS ISSUE

Editorial ......................................................... 1
Clues to Evolution ................................................. 2
Cornellians in Liberia .............................................. 4
A Worldwide Scope in Agriculture ......................... 5
Stimson Hall Vampire Colony .................................. 6
Undergraduates on the Job ...................................... 8
Parking Chaos .................................................... 9
A Project In Understanding .................................. 10
Capsules ......................................................... 12
Alumni ......................................................... 13

Staff

Editor-in-Chief ........................................ Francine Grace '65
Managing Editor ........................................ Conan Mooney '66
Circulation Manager .................................. Kenneth Goldstein '64
Librarian ................................................ Rochelle Yedvab '65

Freshmen: Marsha C. Camp, Susan L. Cooper, Ica M. Kostrub, Kathy E. Lamoreaux, Gregory W. Morris, Brian N. Regrut, Jane M. Silvernail.


Juniors: Rita C. Allen, Manning Gasch, Margot G. Jensen, Rosley I. McFarlane, Candace L. Moore, Peter D. Tukey.

Seniors: Kenneth Balmas, Frank Fee, Robert Fistick, Toni A. Gailey, Susan E. Isler, John P. Lowens, Peter L. Monnier, Wade M. Nye, Renate Rabeler, Owen Wavrinck, Michael Whittier.

COVER—Mann Library windows gleam on a snowy night. Courtesy Frank A. Pearson.

Back page advertisement by Conan Mooney

The Cornell Countryman is published monthly from October through May by New York State College of Agriculture, 490 Roberts Hall, Cornell University, Ithaca, New York. Second-class postage paid at Ithaca, New York. Printing by Norton Printing Co. of Ithaca. Subscription rate is $1.75 a year or two years for $3.25; three years for $4.50; single copies, 25 cents. A member of Agriculture College Magazines Associated.
In the academic year of 1963-64 75,000 students representing 150 foreign countries were studying in over 1,800 universities in the United States. The University of California and Columbia University topped the list for foreign student enrollment. Cornell took eleventh place.

There was one aspect of foreign student enrollment at Cornell which set it apart from other Universities. The novel aspect of Cornell's contribution to international education was seen in the distribution of students in major fields of study.

Figures for the academic year of 1964-65 show a total of 734 graduates and 286 undergraduate students from foreign countries enrolled at Cornell. The highest percentage (about 30%) of both graduates and undergraduates are in the College of Agriculture.

National foreign student enrollment statistics show that over 20% of the students are studying engineering. The humanities claim the second highest enrollment figure. The field of agriculture has the fewest foreign students with a national average of 4.1% of the total. The greatest number of graduate students are concentrated in the natural and physical sciences.

What do these figures represent? The fact that Cornell enrollment figures reverse the national trend in field of interest may be attributed to the presence of the Cornell College of Agriculture. The College is a world-famous center for studies in all aspects of agriculture. The success of the College in attracting foreign students may be attributed in part to the threefold organization system. Resident instruction involves on-the-campus teaching. Research on the campus infuses the courses with new material and provides a progressive outlook for students entering some facet of agriculture after graduation. The work of the extension service provides a link between the College and those who benefit from its research discoveries, the farmer.

Professors on the faculty of the College have opportunities to travel in foreign countries and study the educational system and agricultural problems of these nations. The foreign student coming to study agriculture at Cornell meets professors who have first-hand experience in his country. The organization of the University permits the foreign student to enrich his agricultural training with courses in the related fields of sociology, history and economics which pertain to his nation's problems. Mardee Greenfield has discussed some of these points in depth in the following pages.

The enrollment of foreign students in both graduate and undergraduate divisions has increased over the last few years. It is interesting to note that this is not due predominantly to the increase in the number of new students. It results chiefly from an increase in the number of returning students. This year about two-thirds of the College of Agriculture's 234 foreign students were returning to continue their education.

In addition to training foreign students at Cornell, the College of Agriculture is active abroad in a more direct fashion. Contract programs with foreign governments enable Cornell professors to work and study at universities in other countries. Prof. Carlton E. Wright has just returned from Liberia on a Cornell Contract Project. Ken Balmas has given an interesting account of Professor Wright's accomplishments there in an article which follows.

There are many factors which draw foreign students to the College of Agriculture. The quality of the faculty, the range of courses offered, the dissemination of research discoveries and Cornell contract programs abroad account for a few of the bases of the College's international reputation.

The United States, with its advanced, highly productive agricultural system has a responsibility to help underdeveloped countries. The use of our innovations in agricultural science could eliminate the problem of famine in many countries of the world. The College of Agriculture plays a dynamic role in fulfilling our country's duty. The College has trained many foreign students who return to their countries equipped to reshape and improve their national economies in the light of scientific principles. The College of Agriculture has done a good job and should expand its activities in the future. With increased facilities the College can train more students from abroad to play a significant role in agricultural development throughout the world.

Francine Grace '65
Proteins are quite properly described as the "stuff of life;" for they are the principal building units of the animal body. Muscles, blood, internal organs, skin and even bone are largely or partly composed of proteins. The antibodies that protect us against disease and the enzymes and many of the hormones that regulate physiological processes are proteins.

Proteins are mainly large molecules, but they are composed of chains of 20 kinds of smaller molecules, the amino acids. Each kind of protein is a unique sequence of amino acids, just as an English sentence is a unique sequence of the 26 letters of the alphabet. The sequence of the amino acids in a protein molecule is determined by a specific sequence of genetic coding units in the genes in the cell nucleus. Thus the genetic material, which is the now-famous DNA or deoxyribonucleic acid, controls the manufacture and the structure of all the proteins that compose the animal body. A protein may therefore be looked upon as a translation of a segment of the genetic recipe. Since animals are related to one another in proportion to their genetic similarity we can expect to find evidence of their relationships in comparisons of their proteins.

This is the basis for studies on the classification of birds and other animals which are being done by Charles G. Sibley, professor of zoology in the department of conservation of the New York State College of Agriculture, and the Division of Biological Sciences at Cornell University. The proteins being investigated include blood serum, hemoglobin, the eye lens proteins and the egg white proteins.

One of the methods for the comparison of proteins from different species is called "electrophoresis." In this technique the proteins are placed in a special apparatus and exposed to a flow of direct current. The different kinds of protein molecules will move at different speeds, depending upon their size, shape, electrical charge and other properties. In one type of apparatus the proteins move through a special gel prepared from highly refined starch. The gel acts as a supporting substance and also as a sieve of molecular dimensions. In such a gel the proteins from several species can be compared side by side and their differences and similarities noted. The positions of the proteins in the gel are revealed by special stains which react only with proteins. The proteins are thus made visible and the patterns of different species can be photographed and compared. The results of these comparisons are utilized in taxonomic studies in the same way that morphological characters are used in comparisons of anatomical structures.

In most cases the protein evidence agrees with conclusions that have been reached from studies using the traditional methods. How-

Fig. 1. The flamingos share some anatomical characters (webbed feet, etc.) with the ducks and others (long neck and legs) with the herons. The starch gel patterns of the egg white proteins of the flamingos and herons are nearly identical and indicate that flamingos are closer to the herons than to the ducks.
However, in other cases the protein studies have been able to demonstrate that the resemblance of certain birds is due to superficial adaptation to a similar mode of life and not to common ancestry. This type of resemblance, which is called “convergence,” is often difficult to detect from gross morphology and unrelated groups of similar appearance may be placed together in the classification. When convergence occurs, the structure of most proteins is not affected and hence they reveal the true ancestral relationships. For example, the flamingos have many characteristics which seem to ally them with ducks and geese, while in other respects they are similar to herons. The electrophoretic patterns of the egg white proteins of these three groups show clearly that the flamingos are closer to herons than to the ducks.

Another example concerns the birds of prey. The hawks and falcons are adapted for capturing living animals. Both groups have raptorial beaks and feet and, superficially at least, they are extremely similar. However, they differ in certain less obvious anatomical characteristics and also in their protein patterns. The weight of evidence suggests that actually the similarities are due to convergence, and that hawks and falcons have evolved from unrelated ancestral stocks. The problem here is to determine the true relatives of each group.

An important indication that similarities in proteins are true reflections of similarities is found in comparisons of the protein from species that can hybridize. It seems clear that if two species can interbreed successfully they must have a large percentage of their genes in common. Among birds there have been many hybrids between remarkably dissimilar appearing species, but in all such cases comparisons of their proteins show them to be essentially identical.

The egg white proteins of birds have proved to be an especially rich source of information and material from nearly 2,000 species, from all parts of the world, has been analyzed.

The eye lens proteins and the hemoglobin of several hundred species of birds have also been studied by electrophoresis. The results of these comparisons are being prepared for publication. Many of the protein specimens are sent to Cornell by interested amateurs and professional scientists in many parts of the world. Some are obtained locally and, within the past few years, Dr. Sibley has made special collecting trips to Central America, Australia, New Zealand and Africa to obtain material for study.

Within the past year work has been started with a new method which permits comparisons between the genes themselves. This remarkable technique, known as “DNA hybridization”, takes advantage of the fact that if the double stranded (“twisted ladder”) form of DNA is heated to boiling the two strands will separate. When cooled they re-form the double stranded arrangement because the two halves are complementary to one another. Only strands which are mirror-images of one another can re-form a double molecule. To test the amount of genetic similarity between two species the DNA of one must be labelled with a radioactive tracer such as Carbon 14. The DNA’s from the two species are then brought together while both are in the single stranded form and under special conditions that permit “hybrid” molecules to be formed, providing they are genetically identical or nearly so. It is then possible to measure the amount of genetic similarity between the species. We accomplish this by determining the amount of radioactive DNA that has entered into the formation of molecular hybrids.

Professor Sibley plans to continue with comparative studies on proteins and DNA and to incorporate new techniques as they become available. The data derived from these modern methods will continue to aid in the solution of some of the classical problems of biology.

Fig. 2. The hawks and the falcons are similar in many respects (beak, feet) but differ in several important anatomical characters. The egg white protein patterns also show striking differences. The evidence suggests that the similarities may be at least partly due to convergent evolution. The electrophoretic patterns in this illustration were produced by the technique of “paper electrophoresis”. The pattern of peaks was obtained by scanning the dyed pattern of proteins in a strip of filter paper with a densitometer.

Drawing by Jon Ahlquist
CORNELLIANS IN LIBERIA

by Kenneth Balmas '65

Cornell University is participating in a United States Agency for International Development (AID) program to help upgrade the University of Liberia at Monrovia, Liberia. Cornell's role follows logically from a history of involvement in international education. Support for the University's College of Agriculture comes from the U.N.'s Special Fund and its Food and Agriculture Organization (FAO).

The purpose of Cornell's group is to improve all facets of the University of Liberia simultaneously.

The main function of all divisions of the University of Liberia is teaching. However, many of the professors also manage to do research. It is vitally needed to study circumstances peculiar to Liberia. In addition, an extra-mural program is being developed along the line of Cornell's extension program, which is one of the finest of its kind. Attention is focused on, among other things, the production of rice and rubber, Liberia's most important commodities. The University farm has 125 acres under cultivation.

Work is also being done with citrus fruits and fresh vegetables that could help increase Liberia's economic base. Professor Arthur Pratt, a retired Cornell University College of Agriculture professor, has made real strides in the growing of improved strains. He has been at the University of Liberia for the past year.

Cornell's team in Liberia now numbers 12. Generally, a professor serves for a two year period. For the past two years the Chief of Party from Cornell has been Dr. Carlton E. Wright, professor of food information in the department of agricultural economics of the New York State College of Agriculture at Cornell. Professor Wright describes Cornell's group as outstanding.

Before Professor Wright left Cornell for Liberia over two years ago, he said, "Our approach is to use whatever means we can to help the University's administration develop a first rate institution in the Republic of Liberia." This approach is proving successful. The University of Liberia is achieving a position on a par with other universities of its kind. Academic standards are much improved. Many faculty members have a Ph.D. or Masters degree, most from American Universities.

When this program was being planned, President Weeks of the University of Liberia wanted Cornell selected for a key role. He had received an advanced law degree from Cornell. The Dean of the University of Liberia's College of Agriculture, Dr. Paul C. Ma, is also intimately associated with Cornell. He received his Ph.D. here in 1929. He is Chinese, and one of the first graduates of the Cornell and Nan-king program. Dr. Ma was sent to Liberia by the U.N. Previously he was located in Taiwan.

The Liberian people have a friendly attitude toward those who are helping them. Professor Wright describes them as cooperative and anxious to improve their university. They work diligently with Cornell team members in making necessary changes. Cornellians can be justly proud of their University's role in improving the outlook of Liberia's future.
A WORLDWIDE SCOPE IN AGRICULTURE

by Mardee Sue Greenfield

In 1868 the first class in agriculture was offered at Cornell. To this class came the first foreign student in agriculture to attend Cornell—a Russian. Just 94 years later, in 1962, there were 310 foreign students registered in the College of Agriculture, 70 of them undergraduates representing the countries. This tremendous increase can be attributed to the excellent facilities, faculties, and programs to be found here, all helping to make Cornell a leader and guide in world agricultural development.

The graduate student, seeking a knowledge of American agriculture, finds Cornell the perfect university to attend. With the close relationship that exists between the College of Agriculture and the other colleges within the University, the graduate student may specialize in a field of agriculture, and also in the language and customs of a foreign country of his choice. This would prepare an American student for a career abroad, and help the foreign student with his studies here. For each program, there exist excellent library facilities, and staff members with experience in the particular country. More than a third of the professors in the College have had experience abroad. When a graduate student does his thesis work in a foreign country, every effort is made to have a professor aid him in his work in that country.

Courses in the College are slanted to give students the necessary background and training to enable them to make significant contributions to world agriculture. They train Americans to go to other countries as specialists; train foreign students to return home and guide their fellow countrymen; provides courses in research covering the main factors deterring the advancement of agriculture in certain foreign countries. The College also retains intimate ties with foreign universities, like the University of Nanking and the University of Liberia. The exchange of students and faculty between Cornell and these universities has been invaluable to the understanding and solution of problems in world agriculture.

On the Cornell campus itself, the Center for International Studies coordinates the foreign exchange programs, allowance funds for various agricultural studies, and sponsors a program to bring professors and experts in the field from other lands to lecture here.

Cornell realizes, however, that it is not enough to just offer courses in American agriculture to foreign students. Many of them cannot properly function here because of their ignorance of our way of life. To overcome this obstacle, Cornell sponsors a ten-week summer orientation program for foreign graduate students in agriculture.

The program has not been in existence very long—the first group met only four years ago, in 1961. The idea grew out of the realization by several department heads that foreign students were finding it hard to adjust to our language, our North American culture and agriculture, and our education. The object of this orientation period, then, is to familiarize the students with these aspects of America. The only requirements for admission are that the student be enrolled in a Land-Grant College in the United States (the only other program of similar scope is carried out in Carbondale, Illinois); that he be majoring in some form of agriculture or a related field like home economics; and that he have some problem with the English language.

The countries represented were: Argentina, Chile, Colombia, Peru, Korea, Mexico, Egypt, Iraq, and Taiwan.

The orientation program draws upon the staff of the entire University. Lectures are given to the group on U.S. government, North American culture, and other topics. Mornings are devoted to intensive English training.

To accustom the students to the American way of life, they are taken on tours of local farms, Niagara Falls, and the National Cash Register Company. Emeritus Professor Fred B. Morris, director of the entire program, feels that these trips are excellent illustrations for the students.

Host families are selected to form close social ties with the students and their wives (if they are married). The activities of the students and their hosts include picnics, dances, and fishing.

In general, the program is considered to be a tremendous success by the participating students and faculty. Through this summer orientation program, and the dynamic programs maintained both on campus and abroad during the academic year, Cornell is doing its part to contribute to the solution of the existing problem in world agriculture.
Since the beginning of time, people have been mystified and often terrified by bats. Researchers are gradually clearing up many of the mysteries surrounding these strange mammals.

One of the nation's top experts on bats, Professor William A. Wimsatt, is one of these researchers. Dr. Wimsatt, a zoology professor, maintains live bat colonies in the basement of Stimson Hall on the Cornell University campus. Most notable of these creatures are the vampires, vicious blood-sucking bats the professor collected while in Mexico.

Dr. Wimsatt has taken seven trips to Mexico in recent years and spent nine months there in 1963. One reason he travels to Mexico is to study vampire bats. He is also interested in comparing differences in the reproductive functions of non-hibernating bats in Mexico and their hibernating cousins to the north.

For example, the vampire bat of Mexico breeds the year round, while other tropical bats, as well as hibernating bats, exhibit definite seasonal patterns of reproduction. Professor Wimsatt would like to find out what caused this difference.

The vampire, a vicious species, is the only mammal that lives entirely on blood. It preys on many warm-blooded animals in Mexico and other tropical countries, but is not known to occur in the United States.

Vampires suck blood from the necks of cattle and the combs and feet of chickens. They also prey on burros, horses, and pigs—even man is victimized occasionally.

"These bats most often attack pigs by biting their nipples. If this continues the sows eventually cannot nurse their young," said Dr. Wmsatt. Pigs native to Costa Rica where such occurrences have been described, have learned to lie with their nipples in the mud to prevent attack. Swine shipped from areas where vampires are unknown fail to do this. As a result, they are attacked much more often than the native pigs.

To feed, the vampire bat makes an incision using two large teeth located on its upper jaw. The bottom of its tongue has a pair of grooves. These furrows, when brought against a deep cleft in the lower lip, form a tube (much like a soda straw) through which blood is sucked from the host.

The vampire moves its tongue with a piston-like action and continues to draw the blood through its built-in "soda straw." The blood stays under the tongue until it reaches the back of the mouth, where it flows to the top to be swallowed.

In their natural habitat, vampires drink blood drained from their hosts' blood vessels, but in captivity they drink blood from dishes.

Professor Wimsatt keeps about 180 live vampires in Stimson Hall. He studies their digestive and repro
ductive peculiarities, and compares them with other species of bats.

He has discovered that the 180 vampire bats drink about five gallons of blood a week. "Many people wonder where the blood comes from," Dr. Wimsatt pointed out. "The answer is simple—it's sent to me from a nearby beef slaughter house."

Then he began talking about a calculation he once made on how much blood all the vampire bats in Mexico drink during the year.

"You have to figure one wild vampire will drink about two gallons of blood a year," Professor Wimsatt said. At that rate an average colony of 100 bats needs 200 gallons of blood annually. Multiply that by the thousands of vampire colonies found in Mexico, and the result is a staggering figure of several hundred thousand gallons of blood consumed each year.

This great quantity of blood is usually drained from livestock, and it indicates the economic importance of vampires in Mexico.

But the amount of blood taken from animals each year is not presently the main concern, although it is important. Of greatest economic importance is the vampire bat's disease carrying capability. The greatest menace is rabies, and thousands of cattle and other animals in Mexico die from it each year.

Vampires transmit this disease so rapidly because they must subsist on blood from other animals. As a result they bite many hosts during the year and a rabies epidemic is very difficult to check once it gets started. While catching bats with a net and gloves, Dr. Wimsatt has caught a few rabid specimens. "We checked their brains and salivary glands later, and sure enough they were diseased," he said.

The professor has undergone the painful rabies treatment several times after being bitten by bats. In an area rampant with rabies, it might be suicide not to take the treatment.

Dr. Wimsatt recalls an interesting experience he had in a Mexico City hotel. The professor resided there, and often turned some of his bats loose in his room. A few patrons of the hotel were somewhat startled at this breach of hotel protocol, but the manager didn't mind. In fact he came up to the room several times to see how the professor and his bats were faring.

"The caves of Mexico always lead to interesting problems and dangers," Dr. Wimsatt pointed out. He has explored about 150 Mexican caverns in his search for knowledge about vampires and other bats.

One problem all Mexican caves pose is high temperature and humidity. Temperatures usually range in the 80's and when the sickening odor of bat guano permeates the moist, steamy air, the caves are extremely unpleasant. In fact, the presence of vampires can be verified by the stifling odor of their liquid excretion, which forms distinctive tar-pools on cave floors.

Rabies is commonly discussed as a possible danger when exploring Mexican caves. Histoplasmosis, a fungoid disease of the respiratory passages, is less known. The organisms of this disease are breathed in with dust from the guano-laden cave floors. The fungi attack the lymph nodes of the trachea and bronchi and the results are fatal in some cases.

Student assistants frequently accompany Professor Wimsatt on his excursions to caves. His wife tried caving a few times, and, as he puts it, "She enjoyed herself, but was not exactly enchanted with it."

Perhaps soon the professor will discover what special features of the vampire's digestive system allow it to live entirely on blood. Or perhaps he'll determine what specific factors influence continuous and seasonal reproduction.

If past successes are any indication of the future, Professor William A. Wimsatt will help unravel these and many more mysteries of our mammalian kin, the bat.
Fulfilling practice credits for the College of Agriculture can be rewarding, as it was for Miss Alice Cole, a senior in the biochemistry program. The department’s practice requirement consists of 13 weeks of laboratory work. Miss Cole fulfilled this requirement during this past summer in a most interesting way. She was employed by L’Institute de Recherches Scientifiques sur le Cancer (The Institute for Cancer Research) at Billejuf, France.

Miss Cole had a bourse or traineeship in the histology laboratory of L’Institute. The project she worked on was investigating the effects of tobacco extracts on the skin tissue of monkeys. The extracts, refined from tobacco and tobacco smoke, were painted on shaved areas of skin on the monkeys’ backs. After a period of time the skin tissue was examined microscopically in an effort to find cells showing signs of cancerous tendencies. If such cells were found, the substance involved would be more closely examined.

While the work was, of course, interesting for her, Miss Cole believes the most interesting part of her summer was living in a foreign culture and not as a tourist. Living in Paris on the eighth floor, in a walk-up, cold water flat, commuting to work each day by bus, keeping house without the aid of refrigeration and needing to shop each day, she feels she really came to know France. Asked what comes to mind when she thinks of Paris, she did not mention the Eiffel Tower. Alice recalls the atmosphere of outdoor cafes and the warm compatriotism within the student society.

Earning her biochemistry practice requirement in the New York City Morgue two summers ago, Carol Sachs, class of ’65, worked under Dr. Alexander S. Wiener. Dr. Wiener, a noted scientist, worked with Karl Landsteiner to discover the Rh factor in blood. Carol’s duties consisted of research with primates; work with private cases dealing with Rh factor, paternity identity, and transfusion reactions; and work on homicide and bacteriology cases for the City.

In one case where two girls were violently murdered in their apartment, Carol conducted the blood and saliva tests to see if they had been molested. While working on another case, a suicide off the 86th floor of the Empire State Building, Carol met one of her co-workers who was soon to become her fiancé.

One additional aspect of the morgue worth noting is their private museum where such unusual items as home-made murder weapons, brain sections displaying gunshot wounds, and make-shift techniques for administering narcotics are displayed.

Carol expressed her amazement at the cleanliness and cheerful atmosphere and found the morgue to house many fascinating cases. To this, however, she adds smiling, “It was fun, but one summer was plenty.”
There is no doubt that progress has come to our fair Cornell, but with it have come the perennial headaches so common to our modernized and mechanized society. The most typical headache is the piece of American technology known as the automobile. The Office of Planning and the Traffic Board are working to find remedies to the growing transportation problem at Cornell. Two solutions are needed: finding parking space to accommodate the growing car population at Cornell and facilitating traffic control of some 40,000 car trips made through the campus daily.

There are more than 5,000 student cars registered with the Traffic Bureau, according to Russell W. Rinker of the Board of Traffic Control. In addition 5,300 University employees must get on and off campus every day; most of them drive cars. Many cars come through the campus area on visits, business, or, like the chicken who crossed the road, merely want to get to the other side of the campus. The result is a traffic problem that promises to get worse.

To Anton Egner and his staff at the Office of Planning has fallen the lot of finding “simple” solutions to these critical problems. They have proposed that West Avenue be extended in both directions. This includes the heady business of building bridge-crossings over Cascadilla and Fall Creeks. This would revolutionize campus travel. No definite action has been taken on this proposal.

The real headache on campus, however, is parking. For students, on-campus parking, at least between eight and five, is anathema. However, there are some 1,500 who are allowed to park during this time in the areas of Kite Hill, the Vet College, and the Country Club. These are the commuters who live more than a mile and a half from the campus periphery. All other car-owning students are advised to take a crash course in Cornell Parking Regulations or suffer the horrible consequences.

How has this problem of too many cars and not enough space been solved? Traditionally it’s been accomplished by the removal of student driving privileges. Already, the graduate students have had all parking privileges taken from them, and at one time there was talk in the air to allow only seniors to own cars. But one especially distasteful solution has been diminishing the inner limit of the commuter boundary. The present mile and a half limit was at one time only a half-mile. Raymond Blanchard, the Off Campus Housing Inspector, estimates that there are approximately 1300 students who live in this no-man’s land, i.e. too far to walk (save for members of the cross-country team) and too close to earn a parking permit. There are several solutions that a member of this select group can find to his transportation problem. He can find a bus that goes nearby, a parking space off campus, or a ride with someone who does have parking privileges. All of these failing, he can move close enough to the campus to walk every day, or he can move beyond the limit and thereby earn his permit.

Again, however, new solutions must be found. Of course, it’s possible that the Board might continue this extension of the commuter limit, but one hopes that better solutions can be found for all involved. Several proposals have been made, including the construction of a parking edifice on Kite Hill, and an underground parking lot under the Alumni Fields.

Both of these, and all other proposals, have been rejected by the administration. Now on the drawing board is a solution that could be accepted. This involves constructing an inexpensive parking area east of the Vet College where there are acres of University-owned land. From there a shuttle service could be provided for all commuters. Awkward? Inconvenient? Perhaps, but in 1970 it is expected that there will be only 2,950 parking spaces (a drop of about 290 from the present number). Add to this the expanded enrollment and concomitant expansion of staff and faculty, and one will see that the situation is critical, and a solution must be found very soon.

In this year of Cornell’s centennial celebration, it is fine to take a look backwards at Cornell’s accomplishments. For Cornell to maintain its tradition of excellence, it must look forward—even in this seemingly trivial, unacademic matter of transportation.
Honduras:

A Project In Understanding

by Joan Solomon '67

Some get just a little more out of Cornell.
Some are willing to give of themselves in order to learn.
Some consider education not a September through June, but a year-round experience.
These “some” participated in the Cornell in Central America Project.
Originally known as the Honduras Project, this program was sparked by Paul L. Jaquith, presently the Director of Cornell United Religious Work. Reverend Jaquith became aware of a void in cultural exchange between the United States and the countries of Central America. The Central American people didn’t know the truth about our nation. They knew only what they saw in our films, and what they gleaned from an occasional overzealous American businessman. Nor did we have a true picture of what their lives are like. We perhaps visualized an underprivileged people who spent hours of back-breaking labor trying to salvage from small tracts of near-sterile land enough crops to live on, and there our thoughts ended. The myths and the misinterpretations had to stop. A program was originated whose purpose is to let the truth be known.
The Cornell in Central America Project sends down, each summer, small groups of Cornell students to live and to work with the people of the rural communities in these countries. To be accepted as a project member is not easy. Through personal interviews with previous project members an applicant must show a general ability to get along with different people as well as maturity and judgment in unusual situations. Some facility in Spanish is also required.
The project follows a five-point program. The first part of the program consists of aid in construction. The students help the townspeople to build roadways, school-buildings, and athletic fields. They recently helped them in the construction of a CARE distribution center. The stress is always on working side by side with the people.
The second point is to help increase Spanish literacy. Seventy-five per cent of the people of Honduras cannot read or write. It is the opportunity they are lacking, not the desire. Even today many communities’ facilities for education stop after the sixth grade (through a series of skits and shows which emphasize the importance of literacy), the Cornellians are trying to drum up enthusiasm for the program they are conducting of teaching the people to read and write.
The third aspect of the project involves health. In many Central American villages a doctor comes but once a month and conducts a clinic for a fee that is supposedly a nominal one. Often it isn’t. For the most part the people depend upon their own folk remedies to cure their ailments. A nurse travels...
with each project group. In her, the people now have a convenient source for learning the more scientific methods of treatment.

The fourth point of the program is extending recreation. Instruction of the children in the skills of group games is minimal in schools. Project members teach them group sports, as well as construct more adequate courts. Sports equipment is obtained from CARE.

The fifth and last point is to aid the people in reading, writing and speaking English. This instruction, basically on the elementary level, concentrates on common phrases for everyday use. Phonetics is sometimes included in the material taught.

Thus, in these five areas, the Cornellians do help the people. More important though, through their very presence and their desire to learn about those who are different from themselves, they provide a bridge between cultures.

One of last year’s project members, Kris Mershrod, is a student in the College of Agriculture. He studied the agricultural methods of an area in Guatemala to which he was assigned. He observed that farming is on such a small-scale basis in Guatemala that the individual landowner is not willing to risk what little he has to try a new technique or machine. He therefore concludes that the farmer must be made more aware of the practicality of advanced methods before he will use them. Only then will better quality and higher production result. As a student of international agriculture, Kris gained much from his experiences abroad.

He became acquainted with the language and the culture of the people with whom he will someday work. This was valuable to him in preparation for his future profession.

The Cornell in Central America Project is interdenominational. CURW provides half the funds for it while the student participants provide the remainder. It started as the Honduras Project, has spread to Guatemala, and hopefully will be expanded to include all of Central America. This year’s group will be headed by Sherwood Becker and Herb Oestreich. Unfortunately, the amount of funds provided by CURW has been cut down. As a result, the project members will number only 18 this summer, as compared to over 40 in previous summers.

Members of the project feel that the development of personal friendships with the Central Americans has been a particularly rewarding part of their work. It is sad when, after eight weeks of close comradeship, the students must leave. The natives do not want to be forgotten when their visitors return home. What they do not realize is the knowledge these Cornellians have gained over the summer has become an integral part of their lives, and they will never forget.
There is something new in the field of food preservation: pasteurized eggs. A new method of prolonging the life of the fresh egg has been developed by scientists in Cornell University's dairy food and science department.

Whole eggs are subjected to high vacuum treatment and stored at 40 degrees F. This allows storage and maintenance of grade A eggs for two years. Eggs can also be pasteurized by steam heating for 25 seconds. Destruction of bacteria by this method is almost complete, while natural qualities of the eggs are preserved. Fertile eggs may be preserved for 34 days prior to incubation using the vacuum treatment. This permits new flexibility in hatching schedules.

Consumers of preserved eggs are protected against purchasing cracked eggs. Weak eggshells do not survive the new preserving process. Fresh eggs will now become part of the diet in many areas where preservation was formerly a problem.

Results of a survey conducted by Professor Richard J. McNeil of the College of Agriculture have shown that hunters are not the only people who like deer. Landowners have indicated that they too like deer around, not only for hunting, but also for the abstract, aesthetic value attached to the animal. Landowners who have experienced extensive crop damage from deer, however, tend to be less enthusiastic.

Generally, landowners prefer to have friends and relatives hunt on their property rather than strangers. McNeil points out that programs fostering good relationships between sportsmen and landowners would aid in keeping private lands open to hunters. He also suggests that consideration be given to the purchase or lease of poorer agricultural lands for use as public hunting grounds.

According to Mrs. Doris Wood, associate professor and director of the College Placement Service, nearly one-fourth of the 1964 graduates of the New York State College of Home Economics at Cornell University are attending graduate schools. A majority of the women are studying areas of home economics and related fields. Many of these students hold assistantships, fellowships, or scholarships; others are working toward certification in elementary education.

Forty-five per cent of the 1964 graduates are married. Of those who are married, the employed group outnumbers the homemaker group.

The field of education has attracted most of the graduates. Others have found employment in social work, institution management, business and promotion, research and laboratory work, and communications.

A new plan offered by the New York State College of Agriculture at Cornell University promises to favor the trend toward bigger barns; housing more cows under one roof. New York State dairymen are searching for a modern structure to replace old, small barns. The solution may be found in the new, two-story building that includes stalls for sixty cows arranged in four rows, plus eight calf and maternity pens. According to Professor W. W. Irish, agricultural engineer, the arrangement of the stalls into four rows requires fewer materials and less labor than the conventional two-row barns.

A boost in the growth of animals and birds, resulting from a reduced production of ammonia within their bodies, may aid the control of certain major diseases. Dr. Willard J. Visek, physican and professor of nutrition and metabolism in the animal husbandry department in the Cornell College of Agriculture, has been granted $54,000 for a three year study of this problem by the Public Health Service. He is concerned with the relationship of ammonia production in living systems with the control of liver diseases, tuberculosis, and brucellosis.

The increased mechanization of agriculture has been accompanied not only by economic advantages, but also by an increase in the probability of serious accidents on farms. According to Professor E. W. Foss of the College of Agriculture, elevator and conveyor type machines are the chief offenders, few of them having the protective covering which would be a minimum requirement in most industrial plants. The example of a small child who fell into an auger feeder is cited by Foss as a warning to farmers to cover these machines.

Even with the danger of such machines, accidents in the barn, mainly from falls, still head the list of mishaps. Machinery accidents are next, followed by injuries from cutting or piercing instruments.

Professor James W. Boodley, floriculturist at the New York State College of Agriculture, Cornell University, is in search of a leaf which indicates a rose's nutritional condition. If a terminal leaflet, for example, were found to reflect a plant's nutritional condition, growers could pick this particular leaflet from each plant for analysis.

Professor Boodley hopes to determine optimum nutritional content for each season and establish a plan of foliar analysis for rose growers. This program would assist growers in maintaining good fertilizer practice and would give diagnostic aid for nutritional problems in the field. Professor Boodley indicates the need for a such a system in the rose business. Roses are a long-term crop. They grow from four to ten years longer than other cut flowers.
ALUMNI

DR. LOUIS J. GAMUTI, VET, '16, P. O. Box 146, Fleetwood Station, Mount Vernon, N.Y., operates a small animal veterinary practice. In 1962 his book Park Avenue Vet was published by Holt, Rinehart, and Winston.

HOLLIS V. WARNER '18, P.O. Box 373, Riverhead, L.I., N.Y., has been raising Long Island ducklings for over 40 years, and reports that he is now retired.

JAMES E. FRAZER '26, 555 Milton Rd., Rye, N.Y., has retired after 37 years of teaching. He taught science and math at Riverdale Country School and later in Rye High School.

MISS HELEN UPTON WING '27, Clinton Corners, N.Y., operates in partnership with her brother, a pure-bred guernsey dairy farm which has been in their family for 125 years. She worked in the USDA Bureau of Dairy Industry from 1929 to 1931, and was in the Dutchess County Extension Service from 1950 to 1957.

RODMANN M. FELLOWS '35, RD#3, Van Dorns Corner Rd., Ithaca, spent 18 years in the Soil Conservation Service following graduation. In 1953 he became a partner in the National Farm Consulting Service. He is married and has three children.

JOSEPH P. KING '38, administrator of the Genesee Valley Regional Market Authority, Rochester, (above right) listens to Cornell's Vice Provost Thomas W. Mackesy explain proposed campus construction. Mr. King succeeds Morton Adams '33 as chairman of the Agricultural College Council for 1964-65. Along with his other duties, Mr. King is also President of the Cornell Club of Rochester.

CHESTER W. CURTIS '39, 53 N. Main St., Marion, N.Y., worked as a teacher of agriculture for 10 years in several schools on Long Island. He was supervising principal for five years in Hammond before taking over as principal of the Marion School.

CHARLES W. SPRINGS '40, 753 E. Market St., Elmira, N.Y., is presently a machinist at Upstate Tool Inc. Previously he had been a lab technician, member of the Education Dept. of Elmira College, and a caterer. One of his 11 children recently won a science grant at Cornell.

JAMES L. CAIN '43, 1407 W. Walter St., Elmira, N.Y., is currently Assistant District Attorney of Chemung County in addition to being a partner in a general law practice. He was in the U.S. Army Infantry, received his law degree in 1949, is married and has seven children.

WILLIAM BERLEY '48, 26 Range Drive, Merrick, N.Y., has been with Berley and Co., Inc. since graduation. He is presently vice-president of the firm, which deals with sales, management, and leasing of buildings in Manhattan. He is married to Cornell grad Isabel Mayer, '47 Arts.

GRACE FOX PARSONS '55, RD#1, Penn Yan, N.Y., was employed by Cornell University until 1956, when she began her present job as a chemical Analyst in the Dept. of Food Science and Technology, N.Y.S. Agricultural Experiment Station in Geneva. She is also a member of the Geneva Women's College Club.

PRISCILLA A. TUTTON '62, 104 S. Williams St., Johnston, N.Y., is presently employed as a teacher at Fonda-Fultonville Central School. She has taught both high school science and junior high mathematics.
A Blue Ribbon Award

When it comes to delivering a quality product at a low price, the New York fruit industry is among those receiving top honors.

Try to remember how long it has been since you have strolled through your favorite supermarket without finding fresh fruit for your mealtime enjoyment? You're always sure to find plenty on your grocer's shelves.

This is possible because the fruit industry has solved the problems of year-round storage. And in so doing has kept pace with the rest of that fast moving scene we call American Agriculture.

This industry is a leader in a nation where only the very best can make it to the top. This fact alone would qualify it for a blue ribbon award. However, the fruit industry is not satisfied with just being the best. It wants to be better than the best, and so is constantly searching for new ways to improve its products.
IN THIS ISSUE

Counseling—An Open Door ................................................. 1
Brazil '65 ........................................................................ 2
Silent Salesman ................................................................. 3
University Archives ......................................................... 4
EOA Spells War on Poverty ............................................... 5
An Intimate Look at Viet Nam ........................................ 6
Ag Eng Club—A Meeting Place for Tomorrow’s Engineers .... 8
The Pony—Polo’s Unnoticed Player ................................. 10
Poultry Research—Investigator Employs Electric Stimulus Technique In Studying Nerve - Hormone Relationship ........ 11
Countryman Capsules ....................................................... 12
Alumni ............................................................................... 13

Staff

Editors-in-Chief .......... Conan Mooney '65 and Kenneth Goldstein '64
Managing Editor .................. John Paul Lowens '65
Circulation Manager ........ Rochelle O. Yedvab '65
Librarian .................. Peter D. Tukey '66

Freshmen: Marsha C. Camp, Susan L. Cooper, Ica M. Kostrub, Kathy E. Lamoreaux, Gregory W. Morris, Brian N. Regrut, Jane M. Silvernail.


Seniors: Kenneth Balmis, Jay Brodell, Frank Fee, Robert Fistick, Toni A. Gailey, Susan E. Isler, Catherine L. Johanson, John P. Lowens, Rosley McFarlane, Peter L. Monnier, Wade M. Nye, Renate Rabeler, Owen Wavrinek, Michael Whittier.

COVER—By Jane M. Silvernail '68. Cover story on page 10.
Counseling

Many factors interact to determine academic performance. Those adverse influences which are strictly academic are most often handled by faculty advisors. Those which are primarily financial can be discussed with the Financial Aids Office. With personal problems concerning fraternity brothers, parents, or girlfriends, general motivation, depression, or anxiety, students seek a different type of counseling. The dean of students' office headed by Dr. Stanley Davis, dean of students, along with Dr. James Maas, assistant dean of students for counseling, is always anxious to listen to student problems in any area, and to encourage students to reach their own solutions.

The "operational counseling" which is provided attempts to help the student solve his immediate problems so that his academic achievement will not be impaired. Decisions are not made for the student but alternatives are formulated jointly with students, who then select the best solution.

"Helping students relate to the University and assisting them in getting the most out of their college years" is viewed by Dean Maas as the chief function of his office. He is trying to humanize the University experience through closer contact with students. This closer relationship has been achieved through his interaction with students as the professor of a 700 student introductory psychology course, and as the advisor of numerous student activities including Freshman Orientation. Two important programs were put into effect this year. The first was a letter sent by Dean Davis to all Cornell parents describing and explaining the counseling services offered at Cornell. Its aim was to introduce and acquaint parents with the services and their usefulness. In answer to this letter, Dean Davis received many urgent SOS's from worried parents welcoming his request to be of assistance. The second innovation was Dean Maas' address to the new freshman class during Orientation. In his speech on creative problem solving and the counseling services, he encouraged those with problems to come and talk with him and he emphasized the importance and ease of seeking proper guidance from the various counseling agencies on campus.

This increased publicity along with Dean Maas' image of youth and vitality, fused with an adult shoulder to rely on, has contributed to the greater use of the counseling services this year.

Specifically, Dean Maas coordinates all the counseling offered at the dean of students' office. He ensures a confidential counseling program and helps train staff (including dorm counselors) in counseling techniques. His office is a "way station" from which students can be referred to more specific guidance services such as college offices, faculty advisors, the Mental Health Clinic, the Educational-Vocational Guidance Center, Financial Aids, Reading and Study Skills Center, or the Speech Clinic.

Those seeking help in the dean of students' office most often have academic problems, such as lack of motivation or educational direction, or personal anxiety, problems pertaining to social relations or life in general. While freshmen are mostly concerned with study skills and academic competition, sophomores seem to want more help in selecting a major or in overcoming the "sophomore slump". Juniors and seniors request mostly vocational guidance and stop by the office to discuss career goals.

Dean Maas sees fewer students from the College of Agriculture in proportion to size than from most other colleges. Professor Hertel, Secretary of the College of Agriculture, attributes this to the greater availability of advisors to students and the stress on the individual in the College of Agriculture. Through the years there has been a close tie between professors and their advisees and they have gotten to know each other through such student-faculty activities as luncheons, meetings, and the annual Honunde-kah barbeque.

The transition from high school to college is a frightening yet exciting one. With college come new problems of a more involved and complex nature. Here at Cornell, Dr. Stanley Davis, Dr. James Maas, and our many faculty advisors are all anxious to help the student as he grows from adolescence into adulthood.
Brazil '65

by Kenneth Balmas, '65

Sixteen Cornell students are involved in an international project using an exciting new approach. "Brazil '65", under the sponsorship of Cornell United Religious Work (CURW) in cooperation with Cornell University's Latin American Studies Program, will focus initially on research. The social help aspect, the main concern of many international student projects, will not be added till the research efforts have yielded fruit. Working with the Cornell students and four from Hobart College in Geneva, N. Y., will be 20 Brazilian counterparts.

The main concern of this study team involves the problems associated with modernization and development. Each student will work in his special field of interest. Represented, among others, will be the departments of agricultural economics and rural sociology in Cornell University's College of Agriculture, child development and family relationships in the College of Home Economics, and political science, economics, sociology, and anthropology in the College of Arts and Sciences.

"Brazil '65" has been in the planning stage for the past two years. The cooperation of Brazilian universities has been successfully solicited. Since last July, Dr. Richard Graham, a native of Brazil, and professor at Cornell in Latin American history, has been in Brazil. His activities include contacting Brazilian students and locating possible work sites.

The students participating in the project are now engaged in extensive training which includes a six credit hour course in Portuguese. They have special seminars concerned with modernization and development, and in the understanding of political attitudes they will encounter in Brazil. Specialists not found at Cornell who work in pertinent fields are brought to Ithaca for these meetings. In addition, each student is required to do a short paper in the field of his particular interest.

Brazil was chosen because of its importance and the familiarity of several of the people involved. Janice Perlman, a senior majoring in anthropology, has been to Brazil twice; once on a tour of universities, and a second time for anthropological field work. Miss Perlman is a director of "Brazil '65", along with Dr. Gra-

ham and Rev. William Rogers, Cornell's Presbyterian chaplain who is experienced in social action activities. Also assisting the group are Professor Bert Ellenbogen of the department of rural sociology in the College of Agriculture, Professor Tom Davis of the department of economics in the College of Arts and Sciences, and Professor Charles Eastlack who teaches Portuguese in the division of modern languages in the College of Arts and Sciences. Professor Ellenbogen has just returned from a trip to Brazil.

The group will work in the northeastern part of the country because the most pressing problems are found there. They will receive sponsorship from certain universities, institutions, and foundations in the provinces of Pernambuco, Bahia, and Ceara'. Upon arrival the members of the program will enter a five to 10 day training period at a Brazilian university. They will then divide into at least three groups. The housing situation will vary with the circumstances from university dorms to sleeping bags. For dinner each day all are expected to be present to discuss with their Brazilian counterparts social change in the U. S. and Brazil.

The entire program will last for three years. "Brazil '65" is being devoted to research, and when appropriate, demonstration projects may be attempted. Upon returning from Brazil each person will submit a report of 30 pages describing his work and its results. These will cover several areas including the typing of soils, political movements, and regional planning. Then will come a period of analysis. In the following two summers further research will be supplemented by the application of discoveries made during "Brazil '65" in carefully planned situations.
Did you know that eight out of ten decisions a consumer makes with regard to purchases in a supermarket are made at the moment of purchase? According to Professor Lawrence B. Darrah, of the agricultural economics department in the New York State College of Agriculture, this statistic is the basis of one of the fastest growing businesses in the United States today.

According to the Professor, the idea of packaging food is certainly not new. Food has always been put in some sort of wrapper or container since the beginning of civilization. But before the turn of the century, the main purpose of a package was to protect or contain the product.

Gradually, though, the food package began to become an important "silent salesman." With the advent of the self-service supermarket, the package had to be designed to fit its new role. It had to first, attract the customer; second, to make him desire what was inside; and third, to instruct him in its contents and uses. Packaging rapidly became a science, and the deepest drives of the consumer were explored in an effort to make the "silent salesman" more effective.

Soon the color of a package became an important element. It attracted the consumer's attention, improved the displays, facilitated identification of the product, and gave the consumer a psychological impression of the quality of the product inside. Products that were low-priced and meant to sell fast were dressed up in bright colorful packages. Products that were expensive and high in quality were placed in quiet, off brown or tan packages to imply elegance and taste.

About the time when color in packaging was being extensively explored, the demand for convenience foods was increasing. People wanted to be able to come home from work, open a package, warm it and sit down to eat. They didn't want to be bothered with time consuming, messy preparations. This trend toward prepared foods was further accentuated by the increasing number of women working each year. These traditional homemakers no longer had the time to provide a nutritious meal for their family starting with the basic raw materials. They wanted something to satisfy their families appetites with a minimum amount of preparation.

Packaging research had the answer. They called these new convenience foods, TV dinners. They were simply partitioned aluminum trays with vegetables, meat and dessert in separate compartments—a whole meal that required only heating to eat.

Simultaneously, frozen foods were coming into the spotlight. Quick frozen products such as concentrated orange juices, partially cooked French fries, string beans, peas, and a host of other dietary necessities were placed in the market freezers for the hungry, time conscious consumer. Packaging reached a new peak with the advent of frozen foods.

Packages were designed to either have a window showing the contents of the package, or a color picture of the contents showing it completely cooked and ready to eat. Net weight, ingredients, and simple instructions in the product's use were clearly labeled on the best of the packages. Packaging had become a necessary art and the products put in the best of them were the most successful sellers.

Today, when you walk down the aisle in a modern supermarket, thousands of "silent salesmen" peer at you from all sides, begging you to buy their products. You try to shake them off, and you try to ignore that red package that somehow makes you thirsty, that blue package that somehow refreshes you, that pink package which somehow makes you hungry, and that yellow package that you just can't seem to take your eyes off of, but you know that they'll win in the end.

So you put them in your shopping basket—and packaging research scores another victory.
Once in his shirt sleeves lying in the grass
Under the shadow of a chestnut tree,
I saw James Russell Lowell face to face
And the great poet rose and spoke to me.

This was the reaction of David Starr Jordan '72 (first President of Stanford University) when he met Mr. Lowell at Cornell. This poem is one of literally millions of papers donated to the University by students, professors, and friends and kept on file in the University Archives.

The New York State Regional History and University Archives, located in the John M. Olin library, is a reference and research center for the University manuscript collections. The Regional History collection was founded in 1942 through a Rockefeller Foundation grant to preserve items related to New York State history. In 1951, the University Archives was added, and is now the richest source of Cornell history.

According to Herbert Finch, Associate Archivist, there are 2500 collections in Regional History, and 800 in the University Archives. A collection may be only one letter, or several hundred boxes of letters, diaries, deeds, and business accounts. For instance, Congressman Bill Miller, Republican Vice-Presidential candidate in 1964, donated 200 boxes of papers, speeches, and records to the University. Although the twentieth century collections are the largest, there are several from the late 1800's that are large, one of these is the Andrew Dickson White collection, which covers the founding of Cornell and White's ambassadorship. The most extensive collections concern the College of Agriculture and include the papers of former deans along with extension papers.

Other available collections include the personal letters of four Cornell presidents, the papers of Ezra Cornell, Liberty Hyde Bailey, Albert R. Mann, and others, plus the papers of the various University departments. The Regional History collection also has corporate materials, including the account books and financial records of many businesses. In addition to manuscripts, the Archives also holds oral history accounts (tape recordings of interviews, programs, and public events), a photograph file, pamphlets, University publications, and books about Cornell.

Although there are few casual browsers, the Archives at Olin are in continuous use. The materials provide a personal background impossible to find elsewhere. An extensive cross-indexing system is used to aid researchers in finding specific information. Authors, historians, Ph.D. candidates, and students find the History Collection and Archives a valuable source of raw data.

What was student life like a hundred years ago? What courses were taught here at Cornell? What was going on in New York State politics? What happened to private power development in the State? These questions and thousands like them are answered every day. Inquiries come from all over the country from professors and students at other colleges, from professional archivists, and from interested people. Many of these questions are handled by mail. Often the answer is in a particular manuscript which can be reproduced and sent to the researcher. However, when a project is extensive, researchers can come to Cornell to use the facilities of the Archives. This is especially true for the picture collections and oral history recordings.

In recent years many professional authors and journalists have come to the Archives for information. Within the past twelve years more than two dozen books have been published at least partly based on the holdings in the Regional History Collection or the University Archives. These books include Morris Bishop's History of Cornell, Philip Dolf's Liberty Hyde Bailey, and others. In addition the Archives have been a valuable source of materials for the Centennial. The photograph files, in particular, have been used often for displays (Homecoming Weekend in Ithaca and at Lincoln Center in New York City this spring) and other promotions.

The purpose of the Archives and History Collection can be summed up in the words of John Buchanan, Assistant Archivist, "The Archives serves the University." It provides valuable and otherwise unobtainable information for scholar and student alike.
EOA

SPELLS WAR ON POVERTY

by Joan Solomon, '67
Jerryanne Taber, '67

"We are in the midst of the greatest upward surge of economic well-being in the history of any nation.

"Our flourishing progress has been marked by price stability unequalled in the world. Our balance of payments' deficit has declined and the soundness of our dollar is unquestioned. We worked for two centuries to climb this peak of prosperity.

"But we are only at the beginning of the road to the Great Society . . . Most Americans tonight enjoy a good life. But far too many people are still trapped in poverty, idleness, and fear."

President L. B. Johnson
State of the Union Address

Our government has become increasingly aware of the problems this "poverty in the midst of plenty" has created. Through the Economic Opportunity Act of August, 1964 it promises to build a bridge by which these poor can reach a more fulfilling life.

Several of the major programs authorized under this newly enacted legislation focus directly on America's youth. Work-study programs expand the educational opportunities for children of low income families while work-training programs and a Job Corps will prepare youths for citizenship and increased employability.

On a broader scale, the Community Action Programs are aimed at stimulating urban and rural communities to mobilize their resources to fight poverty. These projects are to be encouraged by financial funds from the federal government.

Some other facets of the act provide for loans to farmers, volunteer assistance to low income businessmen, work-training programs for adults, and a "Volunteer In Service to America Corps." VISTA, a domestic "peace-corps," will recruit and train volunteers eighteen years and older to work on Indian reservations, with migrant workers, in pre- or post-school training activities and other Community Action Proposals.

A special Task Force, headed by Professor Harold Capener of the rural sociology department, has been established to interpret the relevance of the recently instituted Economic Opportunity Act to the Colleges of Agriculture and Home Economics. This delegation has uncovered some sobering statistics:

One out of five families in the United States is destitute. We cannot shrug this off as something far away and apart from our own little worlds, something which can happen only to a backward family struggling to exist in the foothills of Tennessee. It hits hard and usually close to home.

One out of every seven New York families is poverty-stricken. We cannot be content with the misconception that all these low income families are concentrated in the slum areas of New York City. While five-sixths of the state's poor are from urban areas, a full one-sixth live in rural areas. Nor can we be satisfied with the rationalization that it is only the non-whites who are affected. Around three times as many whites as non-whites of the state are among the poverty-stricken masses.

The Colleges of Agriculture and Home Economics, as part of the land grant system, are governed by the philosophy of service to the State and to its people. Through the Extension arms of these colleges, there are many activities presently underway directed toward alleviating the problems of low income families. The 4-H programs serve a significant percentage of non-farm youth. And, in further exploring the horizons of potential service, an experimental project has been underway using the 4-H philosophy and approach of working with groups of high school drop-outs, or potential drop-outs in two large urban centers and one rural setting. The College of Home Economics has also cooperated with other agencies in sponsoring programs in housing developments which concentrate on improving homemaking practices of the needy.

The EOA provides resources and opportunities which will allow for the expansion of existing and/or the development of new projects to help meet needs of human resource development.

The Task Force has recommended that the Colleges of Agriculture and Home Economics take advantage of the Act by making use of its provisions for further development of anti-poverty experiences. Professor Capener sums up Cornell's leadership role this way: "We recognize that one-fifth of the nation and one-seventh of the State have special needs, and the question of how to better understand the origins, causes, effects, and corrective measures for poverty in our society may be interpreted as a proper area of investigation and concern for an institution of higher learning."

Thus, Cornell has taken up the challenge which President Johnson has presented before the nation of relieving all Americans of the bonds which keep men from achieving his highest goals.

"Our nation was created to help strike away the chains of ignorance and misery and tyranny wherever they keep man less than God means him to be."

President L. B. Johnson
State of the Union Address
Much is written in the news today of the United States' position in the war in Viet Nam. Because of the involvement of our own countrymen in this fight for freedom, it is only natural that our interest be centered there. At present, the only facts that we hear are about casualties, bombings and terrorist tactics. Obscured by the cloud of warfare is the life of the people as lived in times of peace.

Among those fortunate enough to be able to serve with these Vietnamese people is Don Voth, a graduate student in sociology here at Cornell. In the fall of 1958, Don and his wife Elnora were sent to Viet Nam by the Mennonite Central Committee, a relief organization financed and sponsored by the Mennonite church. The Mennonite Central Committee first went to Viet Nam in 1954, where they founded a general clinic in connection with the leprosarium already established there by the Protestant missionaries. Up until this time, the only medical facility there had been the leprosarium. At first the committee worked with refugees in the area, but later medical personnel began working with the government people in Operation Brotherhood.

As Don described it, the valley people are what are called the true Vietnamese. He explained that linguistically and culturally they are quite similar to the Chinese people. They live in the densely populated valley areas, where their chief crop is wet rice. The highland people, on the other hand, are entirely different. They are a mosaic of minority groups, and were actually the first people of the country. They are a handsome people, much resembling the Cambodians and Indonesians. It was with these Rhade people that Don worked.

The center of labor was located at the leprosarium in the highland mountain country. The Rhade tribe has some 80,000 - 100,000 people. Don explained that in the early 1800's there was much conflict between the people of the highlands and those of the lowlands. Then the French came in, applied policies requested by the Rhade people, and kept the valley people away. Eventually they built them hospitals, taught them French and began educating them. Although they have been peaceful since that time, they still consider the lowlanders as outsiders. The Protestant missionaries arrived about 1940, to continue the work.

The hospital of the village had its own labs and research facilities, but was in need of new wards. It was for this purpose that Don and his fellow workers had come. The project itself took a year and a half to complete, during which time they had ample opportunity to learn the language of the people, and much about their customs.

These children are watering the village garden with water carried in hollowed out bamboo poles. Notice how the girl in the right foreground uses her hand to regulate the flow of water.

Little Rhade girl in typical native dress. Her black skirt and blouse is a popular combination, but other colors are worn.
During the first four months, they studied the language and gathered materials needed for the construction project. All materials were gathered from the area with the exception of the plywood and masonry imported from Japan. Sand was brought from the river, which was some eight kilometers away. The first load was hauled in an old French truck, after which the truck never recovered. From then on, all hauling was done in an old army truck. Don explained that each morning one man would drive to the river, taking one or two natives with him. In this way they could study the language while they worked. Returning at noon, another man would make the afternoon trip. The entire building was constructed of cement blocks which they made by hand. All timber used in the construction came from the surrounding jungle. The windows and doors were hand made by lowland Vietnamese craftsmen, the process taking about eight months.

The Rhade society is matrilineal, and all families live with the wife's family. They live in long houses built of thatch and bamboo, some of which are up to 100 meters long. There is a large communal room at the front where the adolescents live, and where entertaining is done. At the back are small cubicles for each daughter and her family. Each wife cooks for her own family. At the rear of the house is a room where the oldest people of the family live. The oldest woman in the clan is called the owner of the lands. She is responsible for all of the clan lands, for seeing that other villages don't settle too near the clan land, and that the land isn't polluted in any way. "Women," said Don, "are quite powerful in society but a man always speaks for her and the family." Whatever belongs to a man also belongs to his wife's clan. Hence there are very few private possessions of any sort, except for crosses and hand axes. Crops are not considered private possessions, but are owned by the clan. Don explained, "Some of the men who worked at the leperarium wore old French army coats to work every day, no matter what the weather. If you wondered why, it was because if they didn't wear them, someone else would!"

The system of agriculture he described as "slash and burn." A section of jungle is cut down, and the fallen pieces are burned. There is little actual cultivation of any type, except perhaps the leveling of ashes. The fields are used for several years, and after each year's use they are again burned. Planting is accomplished by the men and women together. The man walks ahead poking holes in the soil with a long pole, while the woman walks behind dropping seeds in the holes from a hollow bamboo tube. After several years' use, the field is abandoned and allowed to grow up to jungle, which will eventually be again reclaimed. The principal crop is dry rice, which yields much less than the wet rice grown in the valleys. The French tried to get them to plant wet rice, which they would do only under threat of a prison sentence, so wet rice is grown only in a few places. Vegetables are also grown among the rice plants, and manioc which yields an edible root. There are a few coffee and rubber plantations which are quite successful, but few people are wealthy enough to own these. There are some animals, which are really a sign of wealth and are seldom used for work. Occasionally they are used for a sacrifice. There are cattle, pigs, water buffalo, and a few elephants, used primarily in logging and for transportation in trading.

Don's wife, Elnora, who served as a nurse at the hospital, explained some of the hospital procedure. "We served no meals to the patients, so some of their family had to come along to see that they received food. There were small benches off the floor in a cubicle at the back of the hospital where the relatives were supposed to sleep, but at night they would sneak in and crawl into bed with their sick relative." At the hospital they treated not only leprosy, but malaria, intestinal parasites, and other diseases. Interestingly enough, these people do not polish their rice as much as do the lowland people, so they have less vitamin B deficiency. "Many times," she explained, "people were brought to the hospital only after animal sacrifices had failed."

Although these highland people are a minority group, they occupy over half the land area. Between 1957-60, the South Vietnamese government sent about 120,000 people from the overcrowded lowlands to resettle the highlands and work the land. Because of this pressure, primarily, the Rhade people wanted to rebel. Originally they were forbidden to carry arms, but many have recently been trained for counter-guerrilla warfare.

In the fall of 1961, Don returned to the United States, after having spent three years in Viet Nam. Much has happened in that country since he left, and undoubtedly much that he described has changed. At present he is enrolled in graduate work, including in his curriculum more study of the Vietnamese language. When asked about future plans, he replied, "I hope to someday return to Viet Nam for research work."

Sociologist Don Voth and Wife Elnora.
Riley-Robb Hall is the central meeting place for the New York State Student Branch of the American Society of Agricultural Engineers—better known on campus as the Ag Eng Club. Since this club is affiliated with a national organization, the qualified students in it are student members of the American Society of Engineers (ASAE) which has its national headquarters in St. Joseph, Michigan. The Cornell club is one of about forty active student branches in the United States and Canada, most of which are at land grant colleges. This year the club has thirty-seven dues-paying members who are in the agricultural engineering courses.

**Purpose**

The purpose of the club is to allow students with a common interest to associate with a professional organization, the ASAE. Through the programs of informal discussions, occasional movies, and guest speakers, these students are able to recognize their own goals in the important field. For example, on December 18, Mr. Jack Kenyon, the Head Salesman of the Massey Ferguson Co. in the North Atlantic area, discussed the opportunities in industry with the club members. Another recent discussion was headed by Professor L. Dworsky, of the Civil Engineers faculty and Director of the new Cornell Water Resources Committee. Through this meeting the members learned about opportunities in the field of water resources development.

This year’s student president, Francis Kostrub, happily reports that the attendance for the five meetings of this academic year has been better than usual. He says that an average of about eight faculty and over twenty students have been attending. The scribe for the club, Joe Patterer, announces the monthly business meeting through the mail, and the minutes of the meetings are always posted in Riley-Robb Hall by secretary John Hendricks.

**Fund Raising**

Although the lack of money is a plague for most clubs, the ASAE easily keeps ahead through the money taken in from the ice cream and milk dispensory machines in Riley-Robb, according to treasur-
er Robert Graves. Some of this money goes into a scholarship for a student in his last year at Cornell. This year, the $100 scholarship went to Martin Sierk, the vice-president of the Ag Eng Club, who is in his fifth year.

**Student Rally**

For the members of this club, the Student Rally was a highpoint of last year. At this time, they were the hosts for students from Pennsylvania State University, West Virginia University, the University of Vermont, the University of New Hampshire, and the Ontario Agricultural College. About seventy-five people—mostly students—were on hand to hear guest speakers discuss the opportunities in industry and the need for graduate work, as well as opportunities overseas for agricultural engineers. Later on that day there were group discussions, a banquet, and finally a tour of Riley Robb. At this year's Student Rally in Guelph, Ontario, Canada, four students and one faculty advisor were attending from Cornell's Ag Eng Club.

**Other Activities**

Other Ag Eng Club functions are the bi-annual conventions held with the national organization. Although relatively few Cornellians are able to attend these conventions, those who have gone are greatly enthusiastic about attending more of them. These conventions allow student branches from various parts of the United States to meet with one another, and discuss their similar interests. Next June, a few Cornellians plan to go to the convention at the University of Georgia.

Perhaps the second largest activity of Cornell's Ag Eng Club is Engineer's Day, which is held in May for high school juniors. Coordinated by the Engineering Council, all of Cornell’s engineering clubs set up displays to interest the visitors so that a better understanding of the field is given to the possible, future engineers. The various engineering clubs also compete with each other for the prize money which goes to the top displays shown.

Students compete against the faculty at their annual picnic at Taughannock Falls State Park. (Courtesy Ag Eng Club)

Always busy, the Ag Eng Club members also have a newsletter to compile several times a year. Furthermore, an annual report is carefully written up and sent to the Farm Equipment Institute, which sponsors competition with other student branches in the United States. It includes department news, club events, and other articles of interest, such as the recent modernization of Cornell's Ag Eng Club by-laws.

**Annual Banquet**

Later in the year, there are two other regularly scheduled events. First a banquet is held for the faculty and dues-paying members, with a guest speaker to highlight the event. Then the last official club function is the picnic at Taughannock State Park, to which all of the Agricultural Engineer faculty and students are invited. Last summer there were between sixty and seventy attending the picnic. At this time it has become the custom for the students to face the faculty in their annual softball game, which is always a happy ending for a year of satisfying activities in the Ag Eng Club.

**Editors' Note**

The next meeting of the Ag Eng Club has been tentatively set for March 9th, room 400 Riley Robb. Those who are interested in learning more about the club are invited to attend.
This month, Cornell will send seven horses to the National Indoor Intercollegiate Polo Championship, the finals of which will be held on the 13th of the month in New York City. The team, under the direction of Dr. Stephen J. Roberts, expects its main opposition from Yale, but the University of Virginia and Georgetown University teams are by no means out of the picture. Since 1955, Cornell has won seven of the nine Intercollegiate Championships. This success is largely due to the continuous careful selection of both players and ponies.

To play successfully, horse and rider must act as a single unit to achieve a unique type of teamwork which makes the player as dependent on his horse as he is on his skill in playing the game. A complex communication system between horse and rider, basic to all equitation, is even more necessary in polo. The rider uses his legs, hands, and weight to control the pony's direction and speed, and response to these aids must be instantaneous, because being in the proper place at the proper time is the art of playing polo.

The high speed and quick turns of polo make it not unlike hockey. In fact, the first English match, played in 1869, was advertised as "Hockey on Horseback." However, the game originated in the Far East some 2,000 years earlier, when true ponies, 12 to 13 hands high, were used. Today, a polo pony is defined as a horse of any size suitable for playing polo. The only real criterion is performance on the field.

Cornell's polo ponies show a wide variety in individual type, ranging from grade Western horses to registered Thoroughbreds. Many of these horses have been donated to the club, but occasionally a good horse is spotted at a sale or purchased elsewhere. One popular Cornell pony, a chestnut gelding called "Brains," was brought from the winter polo fields in Florida five years ago, and has been here the longest of any pony presently in the string.

By the time the polo season gets under way, the ponies have become well muscled and conditioned. There is practice or scrimmage every night of the week, but Saturday evening is the most important, for nearly every week Cornell plays a visiting team.

At Varsity Practice: Team captain Richard Fredericks mounted on "Beau," Charles Bachman riding "Hollywood," and Glenn Armstrong up on "Dilla." (Courtesy J. M. Silvernail)

Preparation for the game starts quite a while before the ponies are led into the riding hall for the players to mount. Team members of both Varsity and Freshman squads brush and tack up the ponies. Tails are braided and forelegs are bandaged for protection. In winter the shaggy coats are clipped so the horses look sleek and are easier to cool out. The mane is always clipped so that it will not interfere with the player's hands and reins. Wrapped forelegs, braided tail, and clipped mane have come to be the distinguishing characteristics of the polo pony.

For the indoor match at Cornell each team is assigned six horses. At half time the teams exchange ponies, so the visitors are given an equal chance to use the better mounts. In this way the ponies are played twice within a game. When not in the action, they are blanketed and walked until called in for the next period.

By the end of the game the ponies are hot and lathered. They are stripped of equipment, sponged with warm water, and blanketed. Precautions are taken that the horses do not become stiff or chilled from standing in this condition, and at a walk they are led around the hall until cool and dry enough to be watered and fed.

One horse, however, that doesn't need to be cooled out, is "Pedro," the newest addition to the string. Pedro is the wooden horse in the recently built "polo cage," a practice room, that is the biggest material accomplishment of the team this year. The room, an addition on the hay barn, may be used by members to improve their skill in hitting balls. Mounted on Pedro, they develop strong mallet arms, as the sloping floor returns a ball shortly after it is hit.

However, what a good pony can add to a game cannot be found in a mere piece of equipment. Pedro is valuable for practice, but he is only a wooden horse, inanimate and unable to become a partner in the working unit of player and pony.
Is there a close relationship between activity of a bird's nervous system and its hormonal system? This broad question forms the basis for research being conducted by Ari van Tienhoven, professor of avian physiology in the department of poultry husbandry at Cornell University.

He has experimented on chickens for about three years—the work being financed by the National Institutes of Health. Chickens are used because the researchers can predict when they will ovulate (produce an egg) and can verify this prediction manually.

Experiments have been initiated to determine how certain stimuli will influence ovulation and oviposition (laying of an egg) in birds. Different sections of the brain are stimulated on test hens and a check is made to discover how ovulation and oviposition, both controlled by hormone secretions, are affected. Other researchers have discovered that stimulation of the hypothalamus, a part of the brain which helps regulate primitive functions such as eating and drinking, delayed ovulation in test hens.

"We have found that stimulation of brain structures outside the hypothalamus has a similar effect," Dr. van Tienhoven said. Since hormonal secretion controls ovulation and the brain sections tested are part of the nervous system, a relationship between the two systems can be drawn from this experiment.

Careful procedures must be followed in the experiments to ensure accurate results. First an atlas diagramming the location of different sections of the brain had to be developed. This atlas is now completed and greatly facilitates the rest of the experimental work.

An instrument has been constructed to hold the hen in place while electrodes are inserted in its brain. First the chicken is anesthetized so it will remain still. Then it is held with its head in a level position and its beak resting in a special beakholder. Next the researchers place a plastic plate on the chicken's head and use it as a guide to drill holes in the skull. Three electrodes are inserted into these holes so their tips are located in the desired section of the brain. The electrodes, which are kept in place by dental cement, are soldered to a radio tube socket, which in turn is attached to the plastic plate.

"No experiments are conducted with the hen for at least three days after the electrodes have been installed," Dr. van Tienhoven said. This gives the chicken time to adjust to "being wired." About 20 per cent of the hens stop eating for a few days as a result of the operation; they are force-fed until their appetites return.

During a test session a chicken is placed in the Faraday Cage, which shields it from external electrical disturbances. A cable is plugged into the socket on the hen's head so that her reactions to different stimuli (such as light, sound and electricity) can be recorded on a polygraph. This polygraph registers the amplitude and frequency of the brain waves on a chart. Then the activity of the brain is correlated with the stimulus given and with the occurrence of ovulation and oviposition.

The effects that light stimuli and drug administration have on brain activity are being tested. It has been found that electrical stimulation on brain structures outside the hypothalamus can cause delay of ovulation and oviposition.

"These findings will probably have no immediate application to the poultry industry," Professor van Tienhoven remarked.

How do the researchers know they have placed the electrodes in the exact section of the brain they want? After they finish experimenting with a given chicken, they send a direct current through the electrodes so that a small lesion is produced at the tip of each electrode. Sections of the brain are then taken and examined microscopically. The lesions formed by the electrical impulse can be checked to determine in what segment of the brain they are located.

Professor van Tienhoven has also observed how electrical stimuli affect the motor activity of hens, and the results are consistent enough to be predictable.

Although few conclusions can be published at this time, Dr. van Tienhoven and his assistants learn more about the nervous and hormonal systems of the chicken with each experiment.
Countryman Capsules

A Cornell floriculturist, Professor Robert E. Lee, N.Y. State College of Agriculture, has been honored with a plaque from the All-America Rose Selections (AARS). He has been called on as an official judge of an AARS test garden at Cornell.

The Cornell garden is one of 24 in the country where new rose varieties are pre-tested. AARS selects an All-America rose winner, and distributes information on roses to the general public.

Professor Lee has judged many floral exhibits and has lectured at various flower shows throughout the state. At Cornell he teaches courses in herbaceous plant materials and supervises the campus gardens.

Professor Frances A. Johnston, an expert in the field of nutrition, retired from the faculty of the New York State College of Home Economics on January 31. Professor Johnston received her bachelor’s degree from Western College in 1923 and her Ph.D. from the University of Chicago in 1941. She has served on the faculties of the College of Home Economics and the Graduate School of Nutrition at Cornell since 1946. In 1951 she received the Borden Award of $1000 and a gold medal at the annual meeting of the American Home Economics Association.

Miss Johnston has done research on the body’s need for and utilization of iron, calcium, and protein, and the requirement of vitamin B12. Most of her subjects have been students in the College of Home Economics.

A new film, “Not a Simple Choice” has been produced by the Cornell University’s TV Film Center. The purpose of the film is to show how the Cooperative Extension Service uses group discussions to stimulate concern and participation in public issues and problems.

In the 28-minute film, a housewife, lawyer, member of a board of supervisors, farmer, engineer, and teacher discuss the problem of coordination and cooperation in community development. The film has been scheduled by TV stations across the State and may later be borrowed by interest groups and organizations. It will be available in the Film Library, Roberts Hall at Cornell University.

A New York State Peace Corps Agricultural Task force will be organized under the guidance of 4-H agents. A recruiting drive for persons between the ages of 20 and 65, married and single, is planned for the weeks between March 1 and April 15.

Professor Wilbur F. Pease, State 4-H leader, N. Y. State College of Agriculture at Cornell says 4-H is working with the Peace Corps on the recruiting project. They are seeking volunteers with an agricultural or home economics background but without a college degree. This group will be the first of its kind to be identified as a State Task Force. Its members will work in Peru and Sierra Leone.

A New York State College of Agriculture professor has been elected president of the American Association of Teacher Educators in Agriculture. Professor Charles W. Hill, of the department of rural education, was elected at the annual meeting held recently in Minneapolis, Minn. He was also elected chairman of the American Vocational Association advisory committee for the National Center for Advanced Study and Research in Agricultural Education. This center has been established at Ohio State University.

Five faculty members of the N.Y.S. College of Agriculture have been awarded travel fellowships of $500 each for study or participation in international meetings.

Professors G. D. Blanpied, W. G. Merrill, and G. A. Marx will combine travel with sabbatical leaves. Professor Blanpied will spend one year at the Agricultural Institute, Kinsale, Malahide, Ireland for research concerning the growth, development, maturity, and storage behavior of apples. Management research as applied to dairy farming will be the primary concern of Professor Merrill for his six month stay at the National Institute for Research in Dairying at Shinfield, Reading, England. Marx plans to devote his nine months at the Institute for Horticultural Plant Breeding, Wageningen, the Netherlands, researching photoperiodism in peas.

Professors Jason Millman and Lois W. Fish will use the funds to attend International meetings. Millman will attend the international congress of the Association for the Advancement of Educational Research at the University of Cambridge in August. During the summer he will also study experimental work on educational testing and measurement at the University of London and other institutions. Professor Fish will be a participant in the first world alumni conference of the International Farm Youth Exchange at the Schwand Agricultural School, Mussen, Switzerland. He will supplement his stay with study and travel in Northern Europe.

Modern-day marketing of food products will be the subject of this year’s Cornell Agricultural Leaders’ Forum. The program, to be held March 25 on the Cornell campus, is entitled “Food Marketing: Conflict and Common Interest.” Nationally-known marketing specialists will gather to probe the conflicts in an effort to aid in the pursuit of common interests.

Sponsors of the forum feel that identification, recognition, and appreciation of the conflicts and common interests in marketing will lead to a “more comprehensive food industry.”
HEADLEY E. BAILEY, '30, 225 East 106th Street, New York 10029, N.Y., is an Examiner of Accounts and Payroll Auditor on the Board of Education in New York City. After graduation from Cornell, he was the Principal Research Interviewer for the Department of Welfare and the Work Progress Administration in New York City. Mr. Bailey has also served as a Senior Field Investigator for the Department of Commerce in Washington, D.C., and as an industrial analyst for the War Production Board.

WILLIAM E. BENSLEY, '39, Vaughn Street, Springville, New York, has been a dairy farmer and Holstein breeder since 1939. Immediately after graduation he pitched with the Longview Baseball Team of Texas. Mr. Bensley has also held a variety of positions, including President of the New York Farm Bureau and Vice-President of the Farm Family Insurance Companies. Mr. Bensley's son, Russell, entered the College of Agriculture in the fall of 1963.

FRANK H. HEDGES, '39, Pine Plains, New York, alternately taught agriculture and farmed after graduation. At the present time he is operating his own farm. He has held offices in his county's Farm Bureau, Extension Service, and Soil Conservation Service. Mr. Hedges is also the Overseer of Pine Plains Grange No. 803.

ARTHUR E. DURFEE, '40, 1156 Ellis Hollow Road, Ithaca, New York, an Assistant Professor of Extension Teaching and Information at Cornell. Since graduation he has been an Assistant of County Agricultural Agent in Allegany, Delaware, Chenango, and Yates Counties. He has also been an Assistant Extension Editor at the University of Maryland. He is presently Associate Director of Extension Teaching at Cornell University.

JOHN H. KLITGORD, '40, 7347 East Main Street, Lima, New York, since graduation has been a member of the Army Air Force (1942-1946) and a partner in Culligan Soft Water Service in Lima. Presently, he is employed in his own seed business. He has been a member of the Lima School Board for a year, and a member and past President of the Lima Rotary Club.

WILLIAM S. PENDERGAST, '43, 21 Raudell Terrace, Middletown, N.Y., has been the Assistant County Agricultural Agent in Erie and St. Lawrence Counties, and more recently County Agricultural Agent in St. Lawrence and Orange Counties. He is also a member of the Rotary Club and the New York State Association of County Agricultural Agents in which he has been Director, Secretary, Treasurer, Vice-President, and President.

DOUGLAS H. MANLY, '50, 36 Central Ave., Fredonia, N.Y., is on the Board of Directors of the Rotary and also of the New York State Canners and Freezers Association. He is now employed by the Red Wing Co. in Fredonia as Vice-President in charge of Sales.

ROLAND H. OSBORNE, '50, R.D. #3, Columbia Cross Rds., Pa., is now operating his own farm. He has been active in the P.T.A., Rotary, and the Eastern Milk Producers Co-op, and is now President of the Columbia Township School Board.

RICHARD D. McMAHON, '55, Box 207, Valatie, N.Y., is now the territorial representative for Swift and Co. (Agriculture Chemical Division) and a member of the Life Insurance Underwriters Association of New York State.

RAYMOND A. ASEN, '56, R.D. 1, Ludlowville, New York member and President of both the Tompkins County Holstein Club and the Pioneer Breeders, also the Director of the Local Board of the Dairymans League is now operating his own farm.

J. WILLIAM KENNEY, '57, 120 Cleveland Blvd., Fayetteville, New York, has been employed at various dairies since graduation. He is presently plant manager at the Byrne Dairy in Syracuse, N.Y. Mr. Kenney is a member of the Zelda National Honorary.

LT. HAROLD A. MILLER, '61, 4683d CES, Box 636, APO23, New York, N.Y., is currently stationed at Thule AB in Greenland. He is serving as chief of the Industrial Engineering Analysis Branch in the Civil Engineering Squadron.
Senator Kennedy Requested a Briefing

Continuing his policy of going to the source for vital information, Senator Robert Kennedy requested a briefing on New York agriculture. He came to the New York State College of Agriculture at Cornell on February 23.

Faculty members and Administration of the College presented facts on 17 issues facing agriculture in the State. Among those discussed were:

1. Inter-regional competition
2. Use of agricultural chemicals
3. Corporation vs. family farms
4. Regional adjustments in dairy farming within the State
5. Alternative uses for land
6. Planned development of urban fringes and rural areas

The College is a center of agricultural knowledge based on research. As one of its primary functions, it provides information to leadership at the federal, state, and local levels.
NUTRITIONAL STATUS:
A CRITICAL EVALUATION

FIFTH ANNUAL INSTITUTE

sponsored by
The New York State College of Home Economics
at Cornell University

9:30 a.m. - 3:30 p.m.
MAY 4, 1965

Alice Statler Auditorium
open to the public
What is adolescent art? Educators recognize distinct forms of artistic expression among elementary school children. Adult artists admire the freshness in child art and often seek to recapture it in their own work. Little is known about the spontaneous form of artistic expression of children between the ages of 12 and 15.

As Dr. W. Lambert Brittain, associate professor, department of child development and family relationships in the College of Home Economics points out, "The sketches that appear in notebooks or on lavatory walls or on the back of fences give us some indication that there may be an art form that is distinct to this age."

The exposure of junior high school youngsters to art training is limited to perspective drawing problems, still-life painting, and lettering plates. The teen-agers' growing concern with sex and hostility for adult authority are hardly considered fit subject matter for artistic expression. Dr. Brittain felt that there was a normal mode of artistic expression for boys and girls 12 to 15 years of age. Last summer he devised an experiment to test his belief.

A two-week class was conducted which involved 42 twelve to fifteen year old boys and girls. The students, all enrolled in local junior high schools, met for art classes each morning. Three trained art teachers conducted the classes which emphasized informality and tried to foster confidence in individual expression. Unusual assignments, designed to provoke the youngsters, involved making an angry picture, a satirical picture and a mural.

All the drawings and paintings produced during the session were retained for analysis by Dr. Brittain and the instructors. Some interesting facts came out during the evaluation of the art work produced by the adolescent group.

The drawings and paintings showed great variation in ability and interest. The work, however, reflected the general tastes and concerns of a junior high group. As Dr. Brittain explains, "These art works could have been done almost anywhere that the instructors had previously taught and, in addition, were typical of almost any time. The planes had become jet-propelled instead of propellor-driven and the "bad guys" were Russian instead of German, but apparently the mode of expression hadn't changed in the last 20 years."

Dr. Brittain also pointed out that adolescent art evolves out of the child's earlier form of expression. The work produced by the boys and girls during the two-week session was characteristic of junior high school art. The art work was an outgrowth of preadolescent influences as well.

Boys and girls in the 12 to 15 age group tend to differ markedly in what they drew and the technique they favored.

Girls tended toward sketchy representations of flowers, plant forms and fashion designs. Boys were inclined toward bolder renderings. Cars and objects of mechanical design were favored by the male pupils. Both sexes were very much aware of their environment. Their surroundings figured heavily as subject material for their paintings and drawings. Abstract artistic ex-
pression was not considered in a serious light. If a youngster said, "I'm just making a design," it usually meant he was just fooling around but didn't want to admit it. Abstract shapes seem to bear little relation to the junior high school adolescent's behavior.

The day before the art sessions ended the children were requested to complete a questionnaire. The instructors had anticipated some of the responses. Others were a bit unusual. Oil paint scored highest among most of the youngsters as the preferred medium. They were asked where they felt they did their best art work. Very few said "at school." Most responded "at home" or "in these classes."

Junior high school art classes tend to frown upon adolescent artistic expression. The elementary school child is encouraged in the release of energy in expressive painting. At the junior high school level, this freedom and encouragement seem to degenerate to the acquisition of lettering skills and pencil shading technique.

Each youngster was requested to submit a self-portrait drawn in pencil on a nine by 12 inch sheet of white paper. The drawings showed a wide range of drawing ability. Some of them were fairly well conceived representations and showed good proportional relationships. The artists were requested to enter comments on the back of the drawings, stating what parts they felt were most successful, which parts were the most difficult to render and their general feeling about the sketch.

Derogatory self-criticisms appeared on the back of both good and bad drawings. These comments included, "What a goony looking nut," "What a lousy drawing," "The head is stupid" and "It's terrible." The arms and legs were described as particularly poor renderings of human limbs. The nature of the comments often had little to do with the objective analysis of the quality of the drawing. Dr. Brittain feels that this might suggest that the development of certain capacity for figure drawing is not really important. It may be that the self is viewed negatively, no matter how it is drawn.

"Adolescent art," Dr. Brittain points out, "reflects the concerns and needs of the adolescent. His concern over his changing relationship with people and over his own self-image is reflected in his timidity and voiced inability to draw people." The adolescent continues to struggle with the representation of human forms, however. This is apparent in the nature of the subject matter popular in adolescent art. Fashion models, portraits and cartoons featuring human forms are recurrent in adolescent drawings.

The youngsters showed marked enthusiasm for the program. Few absences were recorded and the instructors received constant requests from youngsters who wanted to bring friends. This is remarkable for there was no formal instruction except by individual request.

Dr. Brittain has made no attempt to draw definite conclusions from this experiment. He meant to probe the complex and confused area of adolescent art and perhaps develop some basis for theory building. The population under study in the experiment was limited. However, some interesting thought came to light in the analysis of the students' art work.

The instructors felt that junior high school art instruction failed to encourage individuality in artistic expression. Adolescents responded best to teaching methods which gave them a sense of participation. Teaching of specific skills, where the student takes no active part in determining the direction of their use, seems ineffective. The skills are poorly remembered and not incorporated freely into the youngster's personal mode of expression.

The present program of art instruction in the junior high schools, it was felt, fails in channeling the youngster's energies into expressive art forms. The two week session of unrestricted art instruction freed the youngsters from the usual pressures and standards met in the classroom. Many of them, however, reverted to stereotyped subjects and techniques. Dr. Brittain feels that, "To a great extent, the opportunity to establish their own goals or own direction of thinking has been seriously neglected in the present educational system."

The analysis of this research in the field of adolescent artistic expression is not yet completed. Doctor Brittain and his associates plan further discussion and interpretation of their observations. They will publish a formal report of their findings and conclusions later this year.
Jennie McGraw Fiske:

UNIVERSITY BENEFACCTOR

by Kathy Lamoreaux '68

Inscribed on the lower floor entrance to Uris Library is a tribute to Jennie McGraw Fiske. "That's nice," you may say. "But who is Jennie McGraw Fiske?" In her own day, Jennie McGraw Fiske was well-known at Cornell, and, in fact, her will caused one of the most celebrated lawsuits of its kind.

Jennie was an extraordinary woman, with a thirst for knowledge and intellectual growth. She and her father, John McGraw, one of the first trustees of Cornell, followed with interest the creation of the new university. Several weeks before the formal opening in 1868, Jennie gave the University a nine-bell set of chimes, on which was inscribed the 106th chant of Tennyson's "In Memoriam." The immediate result of the action was a personal letter to Jennie from Tennyson. Eventually the chimes, along with the clock later donated by John McGraw, were to become famous, almost symbolic, of Cornell.

From this point on, Jennie found herself more involved in the development of the University, until it became one of the dominant factors in her life. It was at Cornell, in fact, that she first met Professor Willard Fiske, her future husband. Cornell became so much a part of her life that in 1880 she made arrangements for the construction of a magnificent house on the Cornell campus, overlooking Cayuga Lake and the valley. Her marriage to Fiske took place about this time but neither of them ever lived in the house because of Jennie's death from tuberculosis in 1881.

In her will, she left nearly two million dollars to the University, including $200,000 for the McGraw Library Fund, $50,000 to be used for improving McGraw Hall, $15,000 for the construction of a student hospital on the campus, and the remainder of her estate, after all bequests to friends and relatives had been fulfilled.

Andrew D. White was grateful for the bequest, but was concerned that perhaps the charter would not allow the University to accept it. Like most other New York State universities, the amount of property Cornell could hold was restricted, and at the time of Jennie's death, this limit had already been exceeded. White consulted with Judge Boardman, the executor of the will. Boardman assured him that there would be no problem, since the purpose of the restriction was to prevent corporations from making endowments which might lead to excessive power in the hands of certain individuals.

Meanwhile, Professor Fiske and Judge Boardman had become alienated over a small matter. It had been assumed that Jennie's will gave all of her real estate to Cornell, including the new mansion. Fiske had requested to be allowed to occupy the house during his lifetime, and this request had been promptly approved by all the trustees. But soon after, Henry Sage, one of the trustees, reversed his decision and sided with Judge Boardman against Fiske. Fiske, bewildered by the changing attitudes around him, resigned from his post at Cornell and relinquished his sentimental attachment to the house.

Then Professor Fiske learned of the doubts in regard to Jennie's will and that moves were being taken to pass a bill in the State Legislature which would revise the University charter and allow the institution to accept the bequests. He felt outraged because the trustees had failed to inform him of these matters and, when his lawyers told him they had discovered a way to break Jennie's will, Fiske brought suit against the university.

In a final attempt at reconciliation, Andrew White met with Professor Fiske and the two agreed on a settlement. This, however, was rendered impossible by a cablegram from the Executive Committee forbidding any compromise. As a result, the lawsuit was dragged through various courts for seven years. The first verdict ruled in favor of the University, but this decision was later reversed by the Court of Appeals, the State Supreme Court, and the Supreme Court of the U.S.

The lawsuit, however, proved to be beneficial, rather than detrimental, to the University. In addition to bringing about the donation from Mr. Sage, which might otherwise never have been made, the verdict enabled Professor Fiske to keep Jennie's legacy. It drew interest and Fiske added money to it, so that the entire fortune, which he left to Cornell upon his death, was much larger than the original bequest.

Jennie got her library, which was constructed, appropriately, beside the bell tower. Side by side, they remain—Jennie McGraw Fiske's first and last gifts to the University that was her life.
“Give my regards to Davy” is a common chant during the football season, but it also has meaning on the Cornell baseball diamond. The same “Davy” that is saluted after Big Red touchdowns is remembered every spring on Hoy Field.

David Fletcher Hoy, legendary University Registrar and avid baseball fan, was honored in 1923 by the christening of Cornell’s ball park in his name. Davy was a University administration officer for 35 years, but he had a hobby, it was Cornell baseball. He accompanied the team every spring on its southern trip and was faculty baseball advisor for the athletic committee. In fact, while traveling with the team he sustained injuries that led to his death in 1930.

Although an active sports enthusiast, Davy Hoy is remembered more often for the impartial manner in which he performed his duties as Registrar. He won the fear of freshmen, the respect of older Cornellians, and a place in Cornell history.

Davy, a native of Bovina, N.Y., entered Cornell as a student in the class of 1891. He had planned to specialize in botany, but after completing a year of graduate work (receiving his M.S. in 1893), he decided to accept a position as Assistant Registrar. Three years later he was elected Registrar and rapidly became known and admired by both students and faculty.

Legend relates that Davy showed a certain ferocity toward registrants. One story tells of a student who was standing in line outside the Registrar’s office with his hat on. Davy approached the boy, suggested rather pointedly that he should have enough manners to remove his hat, and promptly knocked it off with a ruler.

In addition to aggressiveness, Davy had a reputation for his sense of humor. On one occasion more than 500 students, from all the classes and of all abilities, received failing notices, announcing that due to poor grades their registration for the term had been revoked. When the resulting turmoil had subsided, it was found that this was Davy’s way of jolting certain professors who had been lax in submitting their semester grades. They had apparently preferred to spend their time at teas, receptions, and dances, instead of marking papers so that their students might receive credit for their work. This action brought immediate results and cured a number of Cornell faculty members of the habit of holding up the business of the University.

The Cornell Alumni News, in remembrance of Hoy after his death, commented about the way in which freshmen, fearful of any truth in the legends about him, would tremble so much that they could hardly sign their names when their turns came in the Registrar’s office. Few ever tried putting anything over on Hoy, and fewer succeeded. Those who entered his office muttering defiance, “He can’t pull any of his stuff on me!”, were disarmed by a kindness and consideration they’d thought him incapable of. He would even surprise them by inviting them to his house for tea.

There are other tales about Davy’s secret generosity and soft-heartedness. The Cornell Alumni News made a note of an instance when a girl to whom he had sent a failing notice left immediately for home. Davy was woe-stricken. He wished that she first would have come in and talked to him about it, and “cried a little.”

David Fletcher Hoy is well remembered by Cornell’s chapter of the Kappa Sigma Fraternity, of which he was a member and alumnus advisor. In 1902 he put up a mortgage on his own home so that the present chapter house could be built. He was also welcomed by the fraternity as “one of the boys” and spent much of his spare time there. Eventually a memorial was established, recognizing Davy as “the best friend of the chapter.”

Davy Hoy has held a distinctive position in Cornell history and will always remain a legend in song, and on the baseball field. Cornellians will be giving their “regards to Davy” for many years to come.
Is Instructional Television (ITV) suitable for the Cornell situation? No one knows for sure, but the College of Agriculture is attempting to find out.

Professor Charles Russell of the department of extension teaching and information and the students in his advertising and promotion class are the “guinea pigs.” Professor Russell said that when he was asked to participate in the project he was more than glad to get the experience. One reason his advertising course was chosen was that the class was large (150 students). Six schools and colleges at Cornell are represented: Agriculture, Arts and Sciences, Home Economics, Engineering, Hotel, and Industrial and Labor Relations.

The class was split into two equal parts, according to the student’s S.A.T. college board verbal score, his cumulative average, and his grade in freshman English. All the scores are matched and each student is given a counterpart in the alternate class according to his college. Matching the students according to their abilities, dividing them into two groups of 75 students and putting one group in the live situation and the other in a satellite situation watching two monitors in another building, enables the professor to evaluate his own effectiveness under two different situations.

Many research projects have been carefully conducted throughout the United States on the effectiveness of Instructional Television, so this project is not intended to be a “controlled experiment,” according to Professor William B. Ward, head of the department. He pointed out that the main purpose is to provide the opportunity for a professor to get experience with the method and possibly interest other faculty members.

Some other areas of instruction might profit from the use of ITV. Televised lectures can be used to ease the problem of one professor delivering three lectures in one day on the same subject, or the problem of overfilled classrooms where students must sit in the aisles. Professor Russell says that using several rooms which would receive televised lectures seems to be one of the best ways to cope with the problem of an overcrowded lecture hall.

So far the course via ITV seems to be making good progress and students have reacted favorably. They also have been interested in trying out the method. But it has not been without some headaches for Professor Russell. For example, he and his associates had to work out a system of communication between the satellite group and the live situation and find equipment to make quick reproductions of visuals for overhead projection. Moreover, he had to re-
Television Work?

sign himself to stand in one place while lecturing instead of roaming around the room.

One of his biggest headaches thus far was created when a guest lecturer brought colored slides depicting the history and progress of his marketing firm, as well as the advertising and public relations practices of his company. The TV camera cannot transmit colored slides with adequate definition, so the students had to be reunited in one classroom for this presentation.

Operation of the camera was worked out in advance so that it could be done by remote control by Professor Louis Kaiser, also of the department of extension teaching and information. It was thought that remote control would be better than manual control because there would be less to distract the attention of the students in the live situation. The monitor in the live situation is placed in such a position that both Professors Kaiser and Russell can view it, but not the students. In this case Professor Russell can see how he is coming over in the satellite classroom.

The communication system is still being improved. Professor Russell said that highly sensitive "rifle" microphones are needed so that students in the live situation can hear questions from the students in the satellite situation. Without them, there is a slight delay while a student asks a question, and then the satellite moderator relays the question to Professor Russell. Professor Russell then relays the question to the class in the live situation, and finally he is able to answer. If he happened to answer the question and then ask the satellite group if the answer was clear, and they said no, the process would be repeated. With the new microphones, students asking questions from the satellite situation can be heard directly by Professor Russell and the students in the live situation.

The Colleges of Agriculture and Home Economics hope to have two or three other courses using the television system in the near future—possibly next year. This depends on whether individual professors will be willing to teach their courses under this method and whether arrangements can be made for space and funds. If the Colleges proceed with the plan, there will probably be a short training session for interested professors during the summer. Studios and other equipment for Instructional Television will be put in the new wing planned for Martha Van Rensselaer Hall.

Professor Russell believes that students are willing to adapt to ITV. We could predict 100 per cent support from the student body—if ITV would help stamp out 8 o'clock classes.

Students viewing television in the "satellite situation,"

Professor Louis Kaiser (l.) operating the camera by remote control. The monitor stands to his right.
The Cornell basketball team enjoyed a winning season this year. It led the Ivy League for eleven games before experiencing three disappointing losses. The team's members defeated Bill Bradley and his Princeton teammates. They set three Cornell records: most points in a single game, 107; most field goals in a single game, 45; and the longest winning streak, 15.

Cornell, unfortunately, had to settle for second place in the Ivy League; it still, however, experienced a basketball season unparalleled in seven long years. The reasons for this successful season were a tremendous offensive unit, exceptional team work, a strong bench, and, of course, good coaching.

Six of the eleven varsity athletes are enrolled in the College of Agriculture, and three of them were regulars. The six players are: Dave Bliss, Bob Berube, Bob DeLuca, Jim Lyons, Tom Bobenread, and Gabriel Durkač.

Dave Bliss, 5'10" guard, is the only first string regular who is graduating. Dave lives in Binghamton, N.Y., where he attended Binghamton Central High School. He is majoring in business management. Dave enjoyed a wonderful season this year. He played varsity basketball three years, and is probably the only 5'10" guard in the Ivy League to hold Bill Bradley to two field goals in one-half of a basketball game. He is also captain of the baseball team. When asked who is his favorite athlete, Dave replied: "William Bradley from Princeton."

Bob DeLuca, 6'1" guard, played opposite Dave Bliss in the back court. Bob lives in Schenectady, N.Y., and attended Linton High School. He is majoring in agricultural economics. Bob is a sensational outside shooter, and is only a junior.

Bob Berube, 6'2" forward, lives in Schenectady and attended Mount Pleasant High School. He played against his present teammate, Bob DeLuca, when they both were attending high school. He is majoring in food distribution and wants to go to the Business School at Cornell after his graduation. Bob, a junior, was asked if he would like to comment on next year's team. He replied: "I am looking forward to next year. We were second this year, but next year I can only predict V for Victory." Bob is a regular on the team. He alternates at guard and forward.

Gabriel Durkač, 6'3" forward, is a sophomore, Gabby, as his teammates call him, lives in Tarentum, Pennsylvania, where he was raised on a farm. Gabby is a Pre-Vet major, and likes to work with large animals. He had the highest academic average on the team: 85.

Jim Lyons, 5'11" guard, lives in Cobleskill, N.Y. He is majoring in statistics and is the only one-handed set shooter on the team.

Tom Bobenread, 6'1" guard, lives in Snyder, N.Y., where he attended Amherst Central High School. A knee injury hampered much of his playing this year. He is majoring in food distribution.

When Coach Sam MacNeil was asked about senior Dave Bliss and the other five players from the College of Agriculture, he replied: "Bliss is an outstanding competitor. He is loyal to his team and school. He has been a courageous leader for the basketball team this year. Berube, DeLuca, Lyon, Durkač, and Bobenread are a fine group of men that we can all be proud to know. They are loyal young men and fine gentlemen."

Next year looks extremely promising. There are four returning regulars, one being a phenomenal substitute named Blaine Aston. Returning also is Bob MacReady, a 6'5" forward whose skill is catapulting 25-foot shots into the basket. He missed a season of play because of a serious knee injury.

The varsity team is getting back its two high scorers, Steve Cram and Bob DeLuca, and its leading rebounder, Gary Munson. Aston is quite capable of compensating for the loss of Dave Bliss.

The players from the freshman team will definitely be an asset to the varsity next year. They compiled a won-lost record of 11-3. Under the tremendous coaching of Jerry lace and Charlie McCord, the freshmen matured into a well-balanced team at the end of the season. Two team members, David Taylor and Gregory Morris, are in the College of Agriculture.

It can be said that even though this year's team was successful, greater things are in store for the future. Cornell can be looked upon as the team to beat next year. With the same excellent coaching, fine team work, and fine team play that were exhibited this season, Cornell should be the powerhouse in the Ivy League next year.
SHARKS BEWARE!

by William Jardine '67

Thanks to the invention of gunpowder, the pioneer farmers of old and many of the farmers today have been able to cope with wild animals. But now, there are many "farmers" looking to the sea as a limitless agricultural prospect.

Today, there is a surplus of food for Americans, but someday the land's limit will be reached and the lives of men will depend on the farmers of the ocean. What hazards and predators will these "farmers" have to face?

Every day, there is one particular marine animal that gets caught in valuable experimental equipment, chews through nets and cables, and takes an occasional nip at a bather. This animal is the shark. In spite of all the years that man has spent fearing the shark, there has not been invented so much as one effective repellent against all species.

The shark is one of those odd creatures that does not fit into any general classification. It has no bones like a normal fish, yet certainly acts like one. In the shark family, there are both egg-laying species and placentals. And, unlike almost every animal on earth other than the bat or the mole, the shark can and will function perfectly well without its sense of sight. In fact, it does quite well without its sense of smell also.

Professor Perry Gilbert of the zoology department at Cornell University has been leading national shark research since shortly after the Second World War. In conjunction with the American Institute of Biological Sciences Shark Research Panel, Professor Gilbert has tested supposedly "infallible" repellents of every sort, and conducted some of the most revealing research ever done with the shark.

At the present time, at Cornell University's Lerner Marine Laboratory, Professor Gilbert is conducting both electro-encephalograms and electro-cardiograms on free-swimming sharks. These experiments were the first ever done on a free-swimming animal. From the data recorded, much has been learned about the heart and brain of the living shark.

The electro-cardiograms produce an unquestionable record of the shark's heart beat and reactions to such stimuli as food and repellents. Work done with the shark previously has been primarily subjective. If the shark's heart reacts much the same way as our own or that of other vertebrates, we will have an insight into both the evolutionary significance of the shark and the possibility of an effective repellent.

The electro-check studies of free-swimming sharks are particularly interesting. Science Magazine reports that the shark's brain is the most primitive vertebrate brain ever tested. The brain is approximately one-third olfactory. For this reason, one would expect the shark's primary contact with its environment to be its sense of smell.

The experiments performed on the olfactory system of the shark have shown marked reactions to such substances as tuna extract and lesser reactions to other materials. Decreasing dilutions of tuna extract have been used to determine how powerful the shark's sense of smell is, as well as to determine the threshold of fatigue. The shark's threshold of fatigue is relatively high, which means that like a dog, it can hold a scent for a long time. Also, at night the shark's sense of smell becomes even more keen. It would seem that this sense would be the ideal target for a repellent.

We still know relatively little about the shark, but men like Professor Gilbert and organizations like the American Institute of Biological Sciences are making notable advances toward figuring this animal out, and reducing the hazards caused by it. Perhaps the shark will not be a hazard for "farmers" of tomorrow.
"As a result of the testing of nuclear devices, processing nuclear fuel, reactor operations and mishaps, the entire biological environment has become contaminated with radioactive materials produced by the splitting of uranium atoms. This has produced concern about the amounts of radioactivity in food, the harm likely to be produced by these materials, and the manner in which the amounts of fission products in the food can be reduced. Awareness of the problem by Federal and State governments has led to the establishment of extensive survey programs designed to keep a constant watch on these radionuclides so that appropriate action can be taken if deemed necessary."

This statement was made by Frederick Lengemann, associate professor of radiation biology at Cornell, in his paper, "Assay of Radionuclides of Milk and Other Food." It highlights some of the work being done at Cornell University's Laboratory of Radiation Biology of the department of physical biology in the New York State Veterinary College at Cornell.

The excellent research facilities of the laboratory, located just beyond the Tompkins County Airport, consist of a new laboratory and office building, livestock housing units, and an unusual radiation exposure field. The exposure field is unique in that it is the only one in this country where the animals can receive radiation from isotopes elevated from a circular well surrounding the animals. The facility is large enough to accommodate cows. The animals can roam freely while being radiated, or they can be placed in metabolic chambers which afford a more controlled and sanitary situation.

The multitude of problems dealt with by researchers at the lab are of concern to many. Therefore a large number of the projects are being done under contract by public and private organizations. For example, the United States Department of Agriculture is sponsoring studies involving the effects of radiation on the levels of strontium, cesium, and iodine in milk and meat. In the first instance the aim is to discover how much radioactive material gets into the food chain, and how the levels might be altered by high levels of external radiation that might occur in some fallout situations.

A project for the United States Department of Defense involves the study of the effects of radiation on neurophysical phenomena such as nerve transmission and behavior.

The Office of Civil Defense has a study under contract to determine the availability of radioactive materials from particulate fallout for milk or for meat production when ingested by various classes of farm animals. This program is intended to correlate with a similar study being done at the University of Chicago using human subjects. Since the literature in this area is growing rapidly one man is employed full time to compile and analyze data from all over the world. The specific aim involved here is to learn how to predict levels of radioactive materials in

Rabbits in metabolic chambers receive radiation from isotopes elevated from a circular well.
food after possible nuclear explosions.

Other studies presently underway include the determination of iodine secretions in milk and the absorption of calcium from the intestine. Radioactive materials are fed to goats and other animals in order to discover what happens to those materials, and how long it takes an animal to get rid of the radioactive particles ingested. Other studies involve seeing how much, if any, of the radioactive material finds its way into the meat and milk products of domesticated animals. Though radioactive particles may be consumed, they often are not available for assimilation into bodily tissue.

Work is presently being done with dogs to see how strontium gets distributed in their bodies. Other projects involve studying the absorption of radio-iodine from milk and water by humans. There is also an interesting study on how radioactivity affects the chromosomes of various tissues. The range of the research is illustrated by the experiments where trained rats are being used to discover how these animals are able to detect X-radiation.

The guiding principle of much of this work is indicated by a statement Dr. Comar, head of the department of physical biology, made in his publication, "Behavior of Fallout Radiocontaminants." He states: "The prime questions of practical concern are related to the need for capabilities to monitor the environment, to make predictions as to what will happen from known or predicted injections of contamination into the environment and finally to reduce the exposure of the human population."

Though the list of projects performed in the radiation biology laboratory since it was first occupied in October, 1960, seems endless, the need for more is acute. This situation is reflected in the constant expansion this facility continues to experience.

Along with the research, the education function of the lab is growing. A good example is a new program whereby college biology teachers come to the lab for a period of one year in order to gain a knowledge of this field. The number of courses offered to graduate students is also growing.

The establishment of the department of physical biology in the Veterinary College in 1957 reflects its specific importance in the education and research of veterinary medicine. The existence of this department with its facilities and equipment is a great help to graduate students whose specific problems are often best solved using radioactive isotopes. The diagnostic tests that now can be made are especially useful. They include the determination of the functioning of the thyroid, kidney, and liver, cardiac output, blood and plasma volume, and the diagnosis of pernicious anemia. Available for use are radioactive solutions, wire, beads, and cobalt sources.

The nature of our existence can be vitally affected by discoveries made in the field of radiation biology and it is thus very important that modern physical concepts be applied to these important biological problems.
What happens to the dairymen who go out of business? The rapid decline of the number of dairy farms in the Northeast in recent years has prompted this question. An economic survey by a Cornell University researcher has found some answers to the whereabouts of dairymen dropouts.

Lawrence W. Zuidema, who carried out this study, interviewed farmers who stopped shipping milk during the five-year period 1958-63 in Delaware and Oneida Counties. He reported that about two-thirds gave economic reasons for ceasing milk shipments and one-third accounted their action to physical factors such as age, poor health, and injuries.

Zuidema reached the following conclusions: The majority of those interviewed were satisfied with their decision. Important contributions could be made by public policies. Creating more off-farm jobs and providing information about them would ease the adjustment for those unable to continue their dairy occupation. Since no one type of occupation will suit all the needs and abilities of these cases, limitations due to education and age must be considered. Assistance to farmers in obtaining non-farm work will not greatly influence milk supplies or prices since remaining dairymen will make use of available land. Such policies will indirectly help raise average farm incomes by increasing output per man.

Three thousand high school science students will deluge the Cornell campus March 29-April 2. Six hundred a day will attend lectures and demonstrations presented during the special High School Science Program. They will hear lectures by 38 Cornell professors and six assistants on such topics as “Soap Bubbles and Cleaning,” “Clinical Neurology,” and “Programming a Scientific Computer.”

The lectures and demonstrations are designed to stimulate interest in the natural sciences and related fields. Scientific equipment is used that is not generally available in the high schools.

Leaf roller larva that will develop into a moth.

The Cornell numbering system which ties research work to insect collections has proven its worth once more. Small moths, commonly known as “leaf rollers,” were recently found in St. Jean, Quebec. A Canadian researcher had read that John Henry Comstock, founder of Cornell’s entomology department, worked with an obscure species of leaf roller 83 years ago. He requested the specimens that had been found, and thanks to the numbering system at Cornell which links a researcher to his projects and his collection of insects, the moths were located and shipped.

With the coming of spring, children will be decorating the scene with clothes of bright colors and unusual patterns. Mothers can find valuable advice on how to create these garments in three Home Economics Extension Bulletins called the Simplified Sewing Series.

The titles of the booklets are “Sleeves,” “How to Join the Blouse and Skirt,” and “Collars and Cuffs.” They give tips on such techniques as gathering of sleeves in girls’ dresses, manipulating the waistline to get a good fit, and preparing and attaching collars.

These booklets may be purchased for 25¢ each from the Mailing Room, Stone Hall, Cornell University, Ithaca, N.Y., 14850.

The number of full-time and part-time jobs off the farm for agricultural students is increasing rapidly.

According to a survey by Prof-
HENRY W. SIMONS, '38, 205 Hook Place, Ithaca, is a member of the Board of Directors of the State Poultry Industry Coordinated Effort. He is a Farm Service Representative of the New York State Electric and Gas Corporation. His son Allan is a junior in the College of Agriculture.

GILBERT H. FLINT, '40, Salem, N.Y., is presently Assistant Principal at Washington Academy. Previously he had been a vocational agriculture teacher at the Academy until 1963.

SEYMOUR DANIS, '43, 7137 Kessel St., Forest Hills, N.Y., served during the war years in the U.S. Army Veterinary Service. After the war, until 1961, he worked for the New York City Department of Health as a public health sanitarian. At present he is an insurance broker and is also engaged in real estate management.

GUITTA DRIMER BLAU '47, 356 Maynard Dr., Buffalo, N.Y., since graduation has worked as a chemist at the Bjorksten Research Labs, has taught at the University of Wisconsin and the Yale University Child Study Center. She has also been Nursery School Director at the Jewish Center of Buffalo. She is now married, has two children, and has devoted the last eight years to her family.

JOAN C. FLOOD, '52, 87 Stony Rd., Lancaster, N.Y., now has three children. She has been a lab technician for Professor Bratton in animal breeding research at Cornell University, and a lab technician for the Buffalo University Medical School.

JOHN SPENCER, '54, 133 Grandview Court, Ithaca, is a teaching associate of the department of extension teaching and information, New York State College of Agriculture. He received his M.S. from Cornell in 1962.

W. STEPHEN MIDDAUGH, '62, P.O. 535, Barrington, Ill., is a district manager of the Jewel Tea Company. He received his master's degree in Business Administration from Cornell in 1963 and is a former business manager of the Cornell Countryman.
Cornell University
Was Born
27 April 1865

On this date Governor Reuben E. Fenton signed a legislative bill—actually the Charter of Cornell University.

In it was stated the concept of the University:

"The leading object...shall be to 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 in the several pursuits and professions of life. But such other branches of science and knowledge may be included in the plan of instruction and investigation pertaining to the university as the trustees may deem useful and proper."

For 100 years agriculture has been a cornerstone of Cornell University. Its New York State College of Agriculture is known around the world as a leader in research, resident instruction, extension, and international development. Such is the heritage of its students and faculty—a heritage it cherishes and will pass on to future generations.

No. 7 in a series from the New York State College of Agriculture, a contract college of the State University, at Cornell University, Ithaca, N.Y.
IN THIS ISSUE

After 31 Years ................................................................. 1
The RNA Message ............................................................ 2
Ezra Cornell: Man With A Vision ........................................ 4
Veterinary Medicine—In Retrospect ...................................... 6
Is There a Doctor In The House? ......................................... 7
Pioneering International Assistance ...................................... 8
Before The Ivy-Twined ..................................................... 10
The Land Grant & Cornell ................................................ 12
The Magnificent Seven ..................................................... 13
Extension Found A Way .................................................... 14

Staff

Editor-in-Chief ......................................................... Rochelle Yedvab '65
Managing Editor ....................................................... Michael Whittier '65
Circulation Manager ................................................ Condace Moore '66
Librarian ................................................................. Rosley McFarlane '65

Freshmen: Marsha C. Camp, Susan L. Cooper, Ica M. Kostrub, Kathy E. Lamoreaux, Gregory W. Morris, Brian N. Reigrut, Jane M. Silvermail.


Juniors: Rita C. Allen, Manning Gasch, Margot G. Jensen, John Short, Peter D. Tukey, Sandra Zien.

"Well, we've just worked along from day to day," was Prof. James S. Knapp's modest comment about his career of more than 31 years with the University. His retirement this month as head of the College's press division and professor of Extension Teaching and Information ends a period of service that bridged the terms of four College deans and four University presidents.

A native Ithacan, Knapp received his B.S. in agriculture from Cornell in 1932. Remembering farm practice requirement work with a smile he said, "I actually plowed behind a horse and am proud of the experience." Journalistic experience came from newspaper work before and after graduation, and he returned to Cornell in 1934 to aid in teaching and to supervise the College's news service. Two years during World War II as assistant and then acting director of the University Department of Public Information was the only interruption in 29 years of service as head of the College's press division.

Knapp rates giving a bride away as one of the most unusual experiences of his bachelor career (she was a department graduate assistant whose relatives were unable to attend the ceremony). About his professional achievements he is modest almost to the point of reticence, but an honorable career with the press always has its share of romance and triumph.

On the first tour of its kind sponsored by the Canadian government, Knapp and other newsmen traveled to Callander, Ontario, to visit the tiny Dionne quintuplets and interview their physician, Dr. Dafoe. Dr. Dafoe was the featured speaker a year later at a Newspaper Institute on campus. Knapp arranged several press conferences for the late Eleanor Roosevelt and other national or international figures. His World War II programs specialized in Army and Navy information, and he even contributed to campus sports publicity by reporting football games for the (then) United Press and covering crew races from the press launch.

Professional privileges led him aboard a submarine and an aircraft carrier, and his duties often involved travel. Knapp recalls one of his favorite trips, a cruise to the West Indies before the recent tourist influx. He remembers visiting Havana in 1941 when the Cornell basketball team was also there, and only last summer he accompanied department head William B. Ward to New Mexico State University and on a quick trip into old Mexico.

The bulk of Knapp's career has been reporting the College's research and extension activities: the big events, the honored professors, and the smaller, more ordinary aspects. His contributions have not been limited to his formal duties, however. "The most rewarding part of the job has been meeting people," he said, "farm people, newsman, scientists, and a few celebrities. Traveling and the many different contacts keep you on your toes. To me, keeping up-to-date in so many fields is the challenge of journalism."

Meeting that challenge characterizes Knapp's own work and his contribution to the profession. He conducted annual press competitions for weeklies for 14 years, helped conduct the Newspaper Institutes of the campus's earlier history, and for 30 years issued a weekly "Service Sheet" containing items collected from some 125 papers contributed by the publishers.

Through these activities and his teaching, he made others aware of the challenge and inspired them to meet it. Mrs. Nellie C. Stobbert, former publisher of the Sullivan County Democrat, expresses the feelings of many in her comment on the "Sheet's" final issue: "I am sorry you are leaving, and while someone else may carry on, it will not be 'Jim's Sheet.'"

My brief association with Prof. Knapp has not prepared me to write a fitting tribute to his 31 years of service. Yet my year's experience under his supervision leads me to echo the sentiments of Mrs. Stobbert, the department, and many other friends in honoring and respecting a quiet man who has done his job well, and whose retirement leaves a position that can never be filled in the same way.
THE RNA MESSAGE

by Peter Tukey '66

Dr. Robert Holley and his co-workers here at the Cornell College of Agriculture for the first time have uncovered the text of a very old message—a message much older than the Dead Sea scrolls or even the wall drawings of the earliest cave men. No, Dr. Holley and his team of researchers are not archaeologists. Rather, they are biochemists and the message they have discovered is the one contained in a single nucleic acid. They uncovered the message of this nucleic acid by determining its molecular structure. The text of the message is not long, but its importance is great, for with it science has moved one step closer to a full understanding of the mechanics of heredity.

Nucleic acids are the compounds responsible for carrying the messages of heredity. They make up the chromosomes found within the nuclei of cells, and, as well, are found outside cell nuclei at and around the sites where protein molecules—building blocks of body tissue—are manufactured.

Nucleic acids are basically of two classes. Deoxyribonucleic acids (DNAs) are found within the cell nuclei and make up chromosomes. Ribonucleic acids are found for the most part outside the cell nuclei and are directly concerned with the actual manufacture of protein.

Dr. Holley and his team focused their attention on one member of a particular type of RNA known as the transfer RNA (tRNA). Transfer RNAs are the smallest active nucleic acids known, being barely detectable with the most powerful electron microscopes. They function like switching engines, bringing amino acids—the constituent pieces of protein—to position at the site of protein manufacture. Here the amino acids join together into the long chain which is the protein molecule. Each of these RNA switching engines is specific for one particular amino acid (there are 20 in all), bringing it to its correct position in the forming protein chain. The tRNA studied by the Cornell team is specific for the amino acid alanine and thus is known as alanine transfer RNA.

Transfer RNAs are themselves chains made up of links called nucleotides. Alanine tRNA is made up of 77 of these links. The structure of the individual nucleotide links was known to the researchers. Their job was to determine the order of the links along the RNA chain—a difficult task.

The project was born as an idea in Dr. Holley's mind nine years ago while he was a Guggenheim fellow at the California Institute of Technology. Observations he made then led him to suspect the existence of transfer RNAs. Other workers later definitely established their existence.

Actual work on the project was begun six years ago at the U.S. Plant, Soil and Nutrition Laboratory here at Cornell. The work has been sponsored by the U.S. Department of Agriculture, The National Science Foundation, the National Institute of Health, and Cornell University.

The first problem faced by the research team was that of obtaining a sample of the alanine tRNA pure enough to be used to determine its structure. Because of the similarity among the various RNAs and the care which had to be taken not to damage the molecules during separation, this purification proved to be difficult. Dr. Holley and his co-workers, Mrs. B. Jean Apgar and Mrs. Susan H. Merrill, labored for three years before they finally isolated relatively pure samples of alanine tRNA and two other RNAs in 1962.

With this achievement the researchers were ready to begin the determination of structure. For this work five additional researchers joined the team. They were chemist George A. Everett, biochemist James T. Madison, post-doctoral fellow Ada Zamir, and graduate students Mark Marquisee and John Penswick.

The determination of the sequence of the tRNA molecule involved breaking carefully the 77 link tRNA chain into pieces, separating the pieces, and determining the structure of each fragment. By breaking the chain in various ways, into different sized pieces, the structure of the entire molecule was eventually determined.

With Dr. Holley's skillful hand at the helm (as well as in much of the experimentation), the members of the team worked on their separate tasks.

Mrs. Merrill continued with the work of isolating ever purer samples of the alanine tRNA. To do this, a counter current distribution apparatus was used. This complex of glass tubing and aluminum allows substances dissolved in a liquid to be separated from one another while remaining in solution by the slow
worked on individual experiments using the tools now at their disposal. Ada Zamir examined fragments produced by the saki making enzyme. James Madison worked with fragments created by the action of the pancreatic enzyme. George Everett identified single nucleotides while Mrs. Apgar and John Penswick identified larger nucleotide fragments.

As for Dr. Holley’s contribution to the project, Dr. H. W. Allaway, Director of the U.S. Plant, Soil and Nutrition Laboratory has said, “This project is an accomplishment of a group of people headed by Dr. Holley. And with Dr. Holley, it would have been done, I think, regardless of the working circumstances; and without Dr. Holley, it would not have been done.”

For three years the team worked, learning a little more with each new technique tried, each new fragment discovered and identified. Finally, this year, the last pieces fell into place. They had finally done it. The identity of each of the 77 links in their proper order was known.

In the future many models of alanine transfer RNA will doubtless be built. They will certainly be made of glass or metal or wood to be used in laboratories and classrooms all over the world. But the one Dr. Holley, his research team, and this writer will remember is the first one—the three-foot piece of masking tape on the wall of Wing Hall, inscribed with a felt pen.

passage of a second liquid over the first. Thus the alanine tRNA could be separated from other tRNAs present in bulk tRNA preparations.

The careful breaking of the tRNA molecules was done with enzymes—and some exotic ones at that. One of the enzymes used was derived from snake venom. Another came from a preparation used in the manufacture of saki, the Japanese rice wine. A third was isolated from pancreatic secretions. Each of the enzymes had a characteristic function breaking the 77 link chain at different locations into different sized fragments.

Once the chain was broken the various fragments had to be separated. To do this a method capable of separating small quantities of closely similar fractions had to be developed. This task fell to Mark Marquisce. For the larger fragments he chose, and then improved upon, an ultra-sensitive column chromatographic method. For separating the smaller fragments, from experiments where the break up of the tRNA chain had been more drastic, a method known as electrophoresis was employed.

With samples available, enzymes chosen, and methods for separation of fragments and identification of the end links devised, the team members

Prof. Robert W. Holley examines a strip of tape representing alanine RNA.

Different pieces of the RNA were collected in test tubes in this fraction collector. With Holley is a member of his research team, John Robert Penswick, graduate student from England.
EZRA CORNELL

MAN WITH A VISION

Compiled by Robert Black

In the basement of Riley-Robb Hall there is a collection of plow models, some of which date back to the seventeenth century. However, the one which has an important connection to the founding of Cornell University is missing. It is the plow that Ezra Cornell adapted to bury telegraph cables in 1848.

Although the laying of the cables proved unsuccessful because of unsatisfactory insulation, Cornell’s interest in the invention of Professor Samuel Morse did not die, and he was soon stringing telegraph wires, repairing brakes, and setting up agencies throughout the East. Telegraphy became very important in the country and Cornell’s income grew. By the time he was 50 he was able to retire to his farm and continue his work in agriculture.

Cornell was raised a farm boy, and coming from a long line of farmers, it was expected he would follow in their footsteps. However, when it came time for him to choose an occupation, carpentry looked like an easier, more interesting, and possibly more profitable vocation.

Because of the conditions that prevailed in the farming community, Ezra’s schooling was partly neglected. When he was 17, his father cut out schooling for both Ezra and his oldest brother. The boys, however, were determined to get more education, so they bargained with their father and went to school for the winter term.

In 1825, Ezra decided to take up carpentry. Within a year he built his family a new house and then went to seek his fortune in the trades.

After traveling about picking up jobs as a carpenter, contractor, and machine shop journeyman, Cornell came to Ithaca. He decided to go to work for Colonel J. S. Beebe. Cornell worked repairing Fall Creek Mill and was soon managing both the flour mill and the plaster mill for the Colonel. During this time Ezra wed Mary Ann Wood and built a modest cottage for them on a strip of Beebe’s farm.

Working as Beebe’s righthand man, Cornell planned a tunnel through the Fall Creek cliffs to bring more water to the mills along the way. His plan was successful, and his tunnel is still in existence. He also worked as the manager of Beebe’s 100-acre farm and with the money that he earned he bought land in the Ithaca area and also purchased a large farm in Dryden.

Cornell went to work on the farm in Dryden. After the first year of operation, Cornell thought that he had proved that there were profits in farming, and in a letter to The Cultivator published in January, 1838, he, among other things, gave an accounting of the expenses and receipts of the farm. The conclusion is that the speculation—as he called it—made a $91.88 profit.

When Colonel Beebe guessed wrong on the price of flour and his debts began mounting, he sold his Fall Creek mill and Cornell was out of a job. This did not bother the 32-year-old Cornell, as it left him with more time to devote to his farm.

However, in the early 1840’s, with Ithaca still suffering from the depression of 1837, Cornell left for New York City and the New England States to try to win a new industry for the city. His trip failed and he returned to the farm.

At the turning point in his life, when several members of his family died, Cornell asked his father to come to Ithaca. Here he built a shop so his father could work at his ceramics.

At this time Cornell went on a plow-selling trip through Maine. During this trip he met O. J. Smith, publisher of the Maine Farmer. It was this acquaintance that was to bring Cornell into
the telegraph field.
In January, 1843, the plow salesman left for the South where he had patents on the plow. He found the plantation owners unwilling to buy machinery—they wanted only more land and more slaves. Still hoping to salvage something from the plow venture, Cornell returned home for a short stay and then in July of 1843 went to Maine.

One of his early stops was in Portland at the office of the Maine Farmer, where publisher Smith and a plowmaker were looking at plow parts.

Smith, with a contract to lay a telegraph line, indicated that he wanted a scraper to dig a ditch that would accommodate lead pipe in which Professor Morse’s telegraph wires were enclosed. Congress had appropriated $30,000 for building a test line from Baltimore to Washington.

Cornell listened thoughtfully as Smith explained his idea. When the publisher finished, Cornell told him what he needed was not a scraper, but a different kind of machine. Cornell quickly sketched a horse-drawn machine that would not only dig the trench, but also lay the pipe and cover it up.

Smith said it wouldn’t work, but at the end of an afternoon of arguing he said to Cornell, “Go ahead build your machine.”

And Ezra did. Being at the right place at the right time, and more important, knowing what to do, eventually made Cornell a millionaire. The machine worked successfully in a demonstration for Professor Morse, Smith, and a few curious onlookers. The machine and Cornell had a job. He stayed with telegraphy for several years before returning to a farm that he soon expanded to 300 acres.

Cornell was not just interested in his own farm but in all of Tompkins County’s agriculture. He soon opened a campaign to revitalize the Tompkins County Agricultural and Horticultural Society and became its president in 1857. He was able to put the Society on a sound financial basis.

Cornell also organized the Farmer’s Club of Ithaca in 1859 and later, at his own expense, provided quarters for the club, the utilities, and a reading room where the most important agricultural periodicals and horticultural journals were on file. He began to build a library and a museum for the Club.

His fame as an agriculturist was spreading. Strangers were writing to him for advice. In 1862 he was elected president of the New York State Agricultural Society. Agriculture and the education of farmers was becoming more and more important in the life of Ezra Cornell.

At the conclusion of his term as president of the Society he said, “... We yet have many farmers who adhere to the old error that a boy requires a better education if he is to leave the farm and seek a living in another profession, than if he is to continue on the farm. This is a great and mischievous error. It is placing the young farmer at a disadvantage at every step through life.”

Cornell’s philosophy and the passage of the Morrill Land Grant Act were moving together. They were about to meet in the minds of two men—Cornell and Andrew D. White, a youthful member of the state legislature. White had long dreamed of a great university in the United States, patterned somewhat after the most famous centers of learning in Europe. In Cornell he found a man who could help bring that dream to reality.

The two men wrangled, but also worked together to see that New York got the most out of the land grant act. The legislature accepted Cornell’s gift of $500,000 and the other conditions of the plan to found a new university. The bill was passed April 27, 1865.

The Trustees of the University held their first meeting in Albany the next day and they too approved the measure. On October 21, 1865, the treasurer of the University certified the receipt of the University the land it now occupies.

Cornell University’s education for farmers was not without criticism. The student newspaper carried an article which predicted that the Agriculture Department would never fulfill the expectations of the University founders.

Although the answer to the article was unsigned, it could have been written by no one but Ezra Cornell. He said, “I noticed in (The Cornell) Era of October 20 an article on the Agriculture Department of our University...”

“Now it is a well-known fact that the men who do the most for agriculture are not those who work hardest with their hands. The men who determine the composition of the soil and the crop adapted to it, and who invent agricultural machines, are men who study, theorize and experiment; scientific or brain farming is as much better and more successful than mere farming after the ways of one’s fathers as a good doctor is better than a quack.”

Ezra Cornell did not live to see his hopes for the Agricultural Department fulfilled.

The early days of the department were filled with mistakes and failures. The University farm was neglected. The barn built on the farm was a monstrosity and housed European farm equipment which was clumsy and useless in the United States. Competent agricultural leadership was virtually non-existent.

After five years of mismanagement, Isaac Roberts came to Cornell in February, 1874, from Iowa State College. He was appointed to the faculty after submitting, at the request of a friend, a plan for a College of Agriculture at the new University.

Although disappointed and ready to resign in his first year, Roberts stayed. He corrected a few mistakes that year, but the real progress in agricultural education was yet to come. Ezra Cornell died in December, 1874, before Roberts had much to show for his efforts. But in later years, Roberts, who was the first Dean of the College of Agriculture, laid the foundation upon which Cornell’s hopes for agricultural education took form.
From the time Cornell University was established to the present, veterinary medicine has played an important role in the development of the University. Andrew Dickson White, while on a European trip to buy books and equipment and to collect professors for Ezra Cornell, brought back James Law, professor of the Veterinary College in Edinburgh to head Cornell's department of veterinary science.

Veterinary science was first taught under agriculture. During this time, the labs were only barns and fields, and the equipment was scarce. However, despite the many problems encountered by the new department, the first degree of Bachelor of Veterinary Science was awarded in 1871. And in 1876, Daniel E. Salmon, B.V.S. '72 was awarded the first degree of Doctor of Veterinary Medicine conferred in the United States.

Early graduates of the department made important contributions to veterinary medicine. Dr. Daniel Salmon headed the U.S. Bureau of Animal Industry for many years. Arthur M. Farrington '79, was the Director of U.S. Meat Inspection Service. And Frederick Kilborne '81, and Theobald Smith '81, paved the way for the discovery of the carrier of malaria by showing that the southern cattle tick was the carrier of Texas cattle fever.

It was not until 1894 that veterinary medicine became a college in its own right. On March 21, Governor Roswell P. Fowler signed a bill establishing the New York State College of Veterinary Medicine, the first state college to be located at Cornell University. The administrative plan later designed to control the Veterinary College was to be the basis of administration of other state colleges at Cornell.

The first faculty, headed by Dr. James Law, consisted of Veranus A. Moore '87, Simon H. Gage '77, Walter L. Williams, Pierre A. Fish '94, and Grant S. Hopkins '89. The faculty made the College a leader in veterinary science almost immediately, a position it still retains.

In 1895-96, the Veterinary Building, James Law Hall, was built west of Alumni Field at the present site of the College of Industrial and Labor Relations. A relatively small, yellow brick building, Law Hall, was to remain the home of the expanding Veterinary College until the 1950's.

Initially the College of Veterinary Medicine and the College of Agriculture were closely related. In 1909, Liberty Hyde Bailey, Dean of Agriculture, attempted to unite the two colleges to provide a unified front in Albany. The proposal was opposed by Law, then Director of Veterinary Medicine, and the plan was dropped when it was decided that the merger was not in the best interest of veterinary medicine.

Meanwhile, the Veterinary College was trying to get State aid to expand its facilities. In 1920, Moore Hall (south wing) was added to the Vet Building, but soon it did not provide enough room to make up for the increasing interest in veterinary medicine and research.

Increasing interest in veterinary medicine continued for many years. Unable to expand its facilities, the Veterinary College could accept only 10 per cent of the yearly applicants. Despite crowded conditions, the college remained a leader in teaching and research.

In 1958, the College of Veterinary Medicine moved to its new quarters on Tower Road. It now has 19 buildings on 20 acres of land, one of the best facilities for the study of veterinary medicine in the world. Today the College continues its tradition of excellence in teaching and research. The teaching plant is matched by research facilities throughout New York State. These include the Poultry Disease Research Lab on Snyder Hill, Regional Laboratories for Poultry Disease Diagnosis, Regional Mastitis Control Laboratories, the Veterinary Virus Research Lab at Cornell, and sheep disease research facilities.

The many research projects and teaching and medical facilities at the New York State College of Veterinary Medicine are indicative of the College's continuing efforts to provide education and service to New York residents.
Is There a Doctor in the House?

by Rochelle Yedvab '65

At one time or another during our careers at Cornell, we avail ourselves of the facilities of the Gannett Clinic and/or Sage Hospital. The University didn’t always have such fine medical services to offer its students. Student medicine at Cornell and other universities throughout the nation has changed radically during the past twenty-five years.

Henry Williams Sage was the first Chairman of the Board of Trustees of Cornell University. At the time his brown sandstone house was given to the University, for use as a student infirmary, Cornell had from 3,000 to 4,000 students. The residence was never converted into a hospital. It provided only food and bed care when necessary.

In 1912, the University built the hospital between Sage House and Schuyler House. Colonel Schuyler was the first Secretary of the University. His home (which is dated as far back as 1837) is one of the three buildings comprising what we now call Sage Hospital of the Cornell Infirmary.

Although the University provided the hospital, the University Trustees did not take the responsibility for its operation and for the quality of student care. Until 1940, treatment was administered by only local physicians. Prior to 1940, the University maintained a Department of Hygiene and Preventive Medicine. Every University undergraduate was required to take two years of courses in this department. In 1943 the Department of Hygiene and Preventive Medicine was replaced by the Department of Clinical and Preventive Medicine, which emphasized clinical medicine.

In 1940 the job of organizing the medical facilities was delegated to a Clinical Director. A medical staff was organized consisting of University full time and resident physicians, and visiting and consulting physicians and surgeons from the community. An ambulatory clinic consisting of two old houses (replaced by the Gannett Clinic in 1957) was also instituted. Thus, clinical services in which the University took responsibility for treatment of students was started in 1940.

During World War II, the Government contracted with the University Health Services to take care of the clinical needs of its service men (Army, Navy, and Air-Force) stationed nearby. After the war, the clinic and infirmary functioned as an integral unit. The medical facilities were called the Cornell University Infirmary and Clinic. This name was retained from 1940 until 1945 when it was changed to the Department of University Health Services.

Cornell has recruited many fine doctors. There are eight full time physicians, a radiologist, a psychiatrist, two clinical psychologists, two psychiatric social workers, a physiotherapist, and the part time services of a dentist and nutritionist. There is a modern ninety bed hospital with a first class operating room. The ambulatory clinic (Gannett) has several specialty sections, including a “cold clinic,” an “athletic injury clinic,” an eye clinic,” and a “mental health clinic.” The clinic has 4800 visitors annually. Seven hundred of the patients who visit the clinic are patients of the mental health division. All health records are kept strictly confidential.

Emotional problems are common among the college age groups, as are common respiratory infections, gastroenteritis, and mononucleosis. Records also show that automobile and scooter accidents account for more serious injuries than athletic mishaps.

Not only are the students satisfied with the University’s health services, but since 1935 no physician has left the clinic for another job. About four have retired.

The students also play a part in determining the policies of the University Infirmary and Clinic. There is a Board on Student Health comprised of three faculty members, three trustees, and three students appointed by the president on recommendations of the Student Council. There are also several ex officio members. The students are contacted on all changes in policy. For example, when the appointment system was put into effect this year, the student board members gathered general campus opinion on the matter.

The facilities are there for student use. A portion of the fees paid to the University covers health care, including up to 14 days per term in Sage Hospital. Hopefully students will not have to make use of these facilities, but if they must, they can do so with confidence.
Pioneering
International
Assistance

When Wessels S. Middaugh died at Bethesda, Maryland, May 29, 1964, a movement was started by friends and relatives to establish a memorial scholarship at Cornell, his Alma Mater. Contributions have come in from all over the world. The fund makes possible the following:

W. S. Middaugh—Alpha Zeta Memorial Scholarship—“In order to recognize those students dedicated to making a real contribution to agricultural business or international agriculture, the W. S. Middaugh—Alpha Zeta Memorial Scholarship is granted in memory of Wessels S. Middaugh, ’26, who dedicated his life to service through a career in international agriculture.”

The first award of this scholarship will be made in 1965-66 from funds provided through The Alpha Zeta Foundation of America, Inc. Thereafter, the scholarship will be handled through the New York State College of Agriculture at Cornell University.

“Wes”, as he was known to friends and colleagues around the world, spent a lifetime in agriculture. He was born on a farm near Ithaca. He graduated with a bachelor of science in agriculture from Cornell in 1926. While earning his master’s he also worked as an instructor in accounting, managed the home dairy farm in nearby Slaterville Springs, and held a part-time position as an Extension Agent.

After he was graduated, the Federal Farm Board employed him as a field worker to do special studies, and then he joined the teaching staff at Connecticut State College of Agriculture (University of Connecticut). At Connecticut he taught accounting and farm management, conducted experimental work, served in Extension activities and was appointed head of the Agricultural Adjustment Act Federal Program in Connecticut. The new duties demanded greater stability, so he proposed to the lovely Jane Palmer. She agreed to handle his household economics.

His abilities in the AAA program attracted attention at the Federal level in Washington and just prior to World War II, Wes was appointed economist in charge of all Bureau of Agricultural Economics work in 12 northeastern states. During the eight years he held this position with the USDA, he met one of his biggest challenges—visualizing the impact of a World War on the American agricultural economy and doing some sound planning for the post-war period.

On the home front, Wes and Jane were building family plans around their progeny, Steve and Alice. (Steve went on to Cornell University for his bachelor of science in agricultural economics and his master’s in business and public administration. He joined his fraternity, Alpha Zeta, the agricultural honorary fra-
Experiments being conducted in fresh water fisheries at Liberia's Central Agricultural Experiment Station at Suakoko. Shown in the picture are Charles L. Jones, USAID Fisheries Technician, and Peter DeJong, Liberian Technician in training. Construction of the Station began in 1951 and was completed in 1953 when operations began. USAID assisted the Government of Liberia in establishing the station and in conducting experiments and training Liberians until 1962. Wes Middaugh watched over this program from its inception to its completion.

ternity, and became Chancellor during his undergraduate days. At present he is District Sales Manager for Jewel Tea Company in the Chicago District. He is also a member of the Board of Trustees for the Alpha Zeta Foundation of America, Inc. Alice is a senior in the School of Industrial and Labor Relations at Cornell now, and is President of Pi Beta Phi Sorority.)

Probably the high point of the varied and productive career of Wes Middaugh came between 1946 and 1949 when he served as agricultural adviser to the Department of the Army in Vienna, Austria. It was his responsibility to help get an increase in food production. Austria's agriculture in those post-war years was having difficulty producing 50 per cent as much food as the country needed. When the Austrian farmers resisted suggestions for increasing production, Wes decided he and Jane would have to work through their sons and daughters. Jane had worked as a 4-H club agent in Connecticut and her knowledge and enthusiasm for the work prompted the two of them to introduce the 4-H concept to the young people. The idea caught on. The Austrian youth found pride of ownership in their cows, pigs, and calves they raised as projects. In less than two years there were more than 750 clubs with more than 18,000 members.

This work was reported by Phil Gaustafson in a national magazine in 1950. Phil wrote: "The whole thing was the brain child of Wessels S. Middaugh, and the clubs are springing up in Austria so fast that the men who started them can't find leaders fast enough . . . the movement spread like a prairie fire over the French and British zones . . . and even into the Russian. The farm recovery program is well on the way toward producing 80 per cent of the country's food needs." The Middaughs continued to work with adults and gradually won their trust and interest.

Wes stayed in Austria as Chief Agriculturist un-
der the Marshall Plan until 1951, when he returned to Washington, D.C. as a supervisor in the Agricultural Technical Services Office.

Of particular significance during these early years of U. S. technical assistance programs were the contributions Wes made to the development of concepts and methods for participant training. This included working out cooperative arrangements for involving other agencies and institutions in this effort. Wes pioneered the idea of involving the Land-Grant Colleges and Universities in the technical assistance program overseas through the mechanism of contracts. In brief, this man played a pioneering role and established the pattern for subsequent extension of technical assistance on a world wide basis.

From 1960 until his death Wes was supervisor of agricultural programs in Africa. He sought the help of many College of Agriculture faculty in disseminating knowledge and techniques in these developing countries.

Among the African programs in which he and his capable assistants took pride were the establishing of a poultry industry, a citrus nursery, breeding and testing ponds for the production of fingerlings, and agricultural assistance in rice experiments.

The friends and relatives pay tribute to this fundamental philosophy in setting up the W. S. Middaugh—Alpha Zeta Memorial Scholarship. The award of $500 is to be made to a student who ranks in the upper two-fifths of his class, is of good character, and who has demonstrated leadership ability. Financial need is not considered and preference will be given to members of Alpha Zeta, the national professional agricultural honorary fraternity.

Wes Middaugh was interested in people. He worked unceasingly to improve policies and methods in personnel evaluation procedures so that the individual could be recognized for accomplishments.
It was October 6, 1868 in Ithaca and from all over the land they came, by canal packet, rail and stage coach. The New York State legislature had unanimously approved the concentration of the Morrill Act funds in one large university, and Ezra Cornell donated the land and $500,000 to the venture. The institution was founded.

White and Cornell's dream had become stone and mortar; professors and books, and now most important, the students had come. Their ages ranged from fifteen to thirty. Some were Civil War veterans, most were young farmers and mechanics from New York villages. There were 412 who qualified to stay; and they hailed from 24 states, including Florida, California and the Dakotas. In addition four nations were represented, including Russia, by a young man named Andrew Pelechin. He had stowed away on a ship from his native Kieff to learn agriculture in America's youngest university.

These students were a serious and hard working lot, many of whom intended to work their way through college. In his fear that there would be too few arriving, Cornell had advertised in the Tribune "...I will assure the boys that if they will perform a quarter of the work that I did at their ages, they will find no difficulty in paying their expenses while prosecuting their studies." This was an exaggeration, and many totally unqualified youngsters were turned down. One who wasn't, David Starr Jordan, completely earned his way through Cornell by menial labor, and later became famous as an ichthyologist, and president of Indiana and Stanford Universities. He had this to say about those days:

"The early days of my Alma Mater, though relatively crude and cramped, were enriched by an enthusiasm hard to maintain in days of prosperity. And the pioneer impulse far outweighed any deficiency in coordination, equipment or tradition. At that time we were all together: freshmen students, freshmen professors, freshman president, without experience or precedent to guide or hinder."

Like all new ventures, the Cornell experiment had many critics. It was progressive in many ways. Under provision of the Morrill Act it offered (in theory) training in agricultural and technical arts. It boasted an amalgamation of utilitarian study with the older disciplines, and provided manual labor for prospective students who did not possess inherited wealth. It was proud that it had no "petty marking system" and that it was not affiliated with any sect or denomination. This latter aspect brought much abuse that Cornell was a "Godless institution."

Though these early students had the beauty of lake, valley hills, and gorge to delight them, as we still do today, the man-made edifices were something less than aesthetically satisfying. Ezra Cornell's austere, Quaker tastes had dictated the design of those early buildings, which White called "grim, gray, sturdy and economical."

Those first facilities were not only unappealing; they were also incomplete. Cascadilla Place and South University (Morrill Hall) had just been completed, and North University (White Hall), was still under construction. Andrew White, years later, had this to say about the young university:

"A little body of teachers, a little library contained in one small room in the cellar, a physical lab contained in a temporary shed. The various colleges and departments which had no existence, lodging rooms inaccessible save by a cow path on the Cornell farm, over gorges and streams which had no bridges, with climbs of 500 feet from town to the simple tower of learning (Morrill) scattered on a gravel bank and surrounded by a rail fence."

Cascadilla Place, originally built to be a water resort or sanitorium, was taken over as a residence for the faculty and family, as well as serving as a dorm for 300 students. It was the center of student life in those days. Heating was poor, toilet facilities were negligible and constant pranks were played in conjunction with the outdoor privies and the gas jets.

One wintry evening, Andrew Pelechin, the Russian student, left his boots outside his door in the hall, and a prankster filled them with water. The next morning the boots were frozen solid.
Though White called Cascadilla "an ill-ventilated, uncomfortable, ill-smelling (meals were cooked there), ill-looking almshouse," it did have the merit of housing under one roof students and professors, thus enforcing intimacy which the students appreciated more than the faculty. And despite criticism by the faculty, the physical facilities seemed to be appreciated by the students. A writer in the Cornell Era (Cornell's first publication), had this to say:

“Our stay in Cornell, though short, only two months, has imperceptibly attached us to her. Although surrounded by no stately elms, no hedge rows, flowers, and gravelled walks; although no ivy twines up and around our buildings, yet we have what we prize more than them.”

This statement reflected the fierce pride Cornellians had for their infant Alma Mater.

One newspaper of the day labeled Cornell as, "A school where hayseeds and greasy mechanics are taught to hoe potatoes, pitch manure and be dry nurses to steam engines." In fact this was a gross misrepresentation.

The scholarship at Cornell in those early days was excellent. Andrew White managed to attract great men to the campus as non-resident professors, such as the indomitable naturalist, Louis Agassiz, James Russell Lowell, and George W. Curtis. In addition there was the brilliant and beloved Goldwin Smith, Charles F. Hart, the genius geologist, and of course White himself, who was a superb lecturer and scholar; his one failing was that he never stopped at the allotted hour.

In the classics, languages and science, Cornell started with the best, but in the industrial arts and agriculture, those early days were frustrating and discouraging. The Russian student, Andrew, along with 20 others, transferred out of agriculture that first year.

Though such men as Caldwell, Law and Prentiss instructed on the peripheral subjects of agriculture (chemistry, veterinary medicine and botany), no qualified man was found to head a department that taught direct agricultural methods. In those tender years agriculture as a science was in the embryo stage. White tried gentlemen farmers who were successful, but they all proved singularly unfit.

Of one such man, a visiting farmer said, "Yew kin depend on't, he ain't agoin' to do nothin'. He don't know nothin' about corn, and he don't want to know nothin'; and he don't believe in pumpkins."

Finally in 1873, there were only seven students left in the department. Enemies of the school noted the fact and asked rhetorically if Cornell was living up to the provisions of the Morrill Act.

At this low point, Vice-President Russell wrote to White who was away, "something must be done." Something was done.

Isaac P. Roberts was called to Cornell. A practical farmer who was a genius, Roberts was not college-trained, but today he is called "the Father of Agricultural Science." When he arrived at Cornell the farm fields were blooming with thistles, the livestock were sickly and the equipment was broken down.

At first discouraged, Roberts rolled up his sleeves, and set to work. He turned the farm strictly into a place for experimentation rather than an instrument of food production for the institution. He also introduced new crops, varieties and breeds, and built one of the first permanent silos in America. The notion of students earning their way by farm-labor was banned, and enrollment in the department was increased by offering free tuition to students. From this humble start has emerged one of the greatest centers of agricultural training and research in the world.

Entertainment was as important for those early Cornellians, as it is today. Baseball, though primitive, was popular. Runners were put out by throwing the ball at them, the catcher had no protection, and the game was played on the campus which also served as the cow pasture. For one game the Ithaca Journal reported, "The main feature of the game came in the seventh inning, when the visitor's captain slid into what he thought was third base."

Cornell evolved its own form of football which was a combination of soccer, rugby, and a general free-for-all. But the sport was not too popular with the administration as evidenced by an incident in 1873 when President White refused to let a group of 40 go to Michigan to "agitiate a bag of wind."

It was rowing that really put Cornell on the map. The school was only seven years old when in 1875 it astounded the rowing world by defeating all contenders in the Ivy League and other schools, to win the Saratoga regatta. Even President White welcomed the heroes back after this feat. It was great publicity for the young university.

These and many more were the events surrounding the early days of our great University. Now as we tour the campus, and see the walls of Cascadilla, Morrill and White Halls, long twined with ivy, it stretches the imagination to recall that one hundred years ago, all this was just a piece of paper and a cow pasture.
Cornell University owes its existence to an act of Congress and a fortunate sequence of events. The first of these events occurred in 1862, when President Lincoln placed his signature on a bill that proposed the establishment of the land grant colleges. The Morrill Act of 1862 foresaw the need for higher education in the newly established states, and provided a means by which state governments could finance it.

A total of six-million acres of public land was donated by the federal government to be divided among the states. Its subsequent sale provided a fund for use by each state to support at least one college. The main purpose of this college, according to a stipulation of the act, was "to teach such branches of learning as are related to agriculture and the mechanic arts," but at the same time not to neglect other important studies.

It just so happened that Andrew Dickson White, who had long dreamed of founding such an institution as Cornell is today, was a member of the State Senate in 1864. According to the Morrill Act, New York had received its share of the western lands, some 990,000 acres. This had been turned over to an institution called the People's College, located in Schuyler County.

The State Agricultural College at Ovid, however, tried to pass a bill that would divide the grant between the two colleges. White resisted any action that would divide the grant. He believed that the greatest benefit to education could be gained only by concentrating the grant on one institution.

In taking this view, White found himself opposing one of his associates, Ezra Cornell, who was then a trustee of the Agricultural College. In a compromise, Cornell agreed to give $300,000 from his personal fortune. This sum, added to the portion of the grant he wanted for the Agricultural College, would, in effect, keep the grant together.

Struck by Cornell's generosity, but even more convinced that the grant should not be divided, White persisted. He now proposed that the grant, plus the pledge made by Cornell, be given to some single institution.

The People's College, unable to comply with certain restrictions for receiving the endowment, introduced a new bill. Had it been passed, this bill would have given the People's College nearly a million acres of land without the conditions formerly imposed.

At the same time, representatives from many colleges in the state arrived in Albany and demanded shares of the fund for their respective institutions. Just when the bill seemed destined to fragmentation, Andrew Dickson White and Ezra Cornell reached their historic agreement. Cornell had become convinced of the need to concentrate resources and build a university as a center of learning in the state. He pledged a total of $500,000 and joined White in the effort to keep the grant together.

The two men submitted the Cornell University bill to the Senate. It provided for a new university and forbade sectarian or partisan control in its board of trustees. It also called for a system of state scholarships and marked the start of a long struggle in the legislature. Passed first in the Assembly and then in the Senate, it received the signature of Governor Fenton.

But the opponents of the Cornell University bill had been strong enough to force inclusion of an extra clause. It allowed the People's College to retain the land fund if within six months the college could fulfill the conditions under which the fund had originally been granted. This never happened, and in September of 1865, the trustees of Cornell University met for the first time.

Not only did Ezra Cornell provide the half-million dollars required by the charter, but also 200 acres of land as a site. He located the best of the western land for the new university and arranged, at great financial risk to himself, to hold much of the land. The market was flooded at this time and prices dropped drastically. Because of Cornell's foresight in waiting for the return of better land prices, a profit of about five million dollars was made.

The Land Grant of 1862 was followed by another in 1890. Regular appropriations for the support of the land grant colleges became a federal policy and federal funds were made available in later years by further legislation.

The result has been the founding and maintenance of some 70 land grant colleges and universities, including Cornell, throughout the country. The conditions of the act were carried out by the states either by establishing separate colleges for the advancement of agriculture, the mechanic arts and military science, or by making such a school a unit of the state university. By performing research, teaching and extension work, these colleges are a most important source of public education.
The Magnificent Seven
by Kenneth Goldstein ’64

During Cornell’s Centennial Year it is fitting that we should remember those men who have helped make Cornell what it is today. We have only had seven presidents and each has left his impact on Cornell.

Andrew Dickson White, our first president, served from 1866 to 1885. It was White who helped transform Ezra Cornell’s hopes into the reality that is Cornell. Starting from a hilltop he built a university without precedent in American higher education. Where he found things lacking, he innovated. For example, he started Cornell’s liberal and noted policy of student self-government.

In the early days, White himself, did a good deal of teaching. One of his interesting teaching devices was a printed sheet handed out before the lecture which contained all the essential facts, names, and other assorted data. In between each page was a blank sheet, provided so that the student could capture the essence of the lecturer’s ideas in his own words.

It was fitting that Charles Kendall Adams should have assumed the second presidency, for he was an ardent admirer and pupil of White. He served from 1885 to 1892 and followed in White’s footsteps, although his was a relatively undistinguished administration. He was not popular with either the students or the faculty. Although he was conservative, he did reorganize and consolidate many of White’s innovations. Departments, such as Agriculture, became separate schools, each with its own dean and faculty.

Our third president, Jacob Gould Schurman, served from 1892 to 1920 and radically influenced Cornell’s development. He was a man of tremendous intellect and dedication, especially to the beliefs of White. He had firm convictions and an equally strong dedication to carry them out.

He served during a period in which the country, and indeed the world, were in tremendous flux, undergoing the strains of industrialization. Schurman tried to combine the idealism of antiquity with the necessities of a modern society. He achieved this objective at Cornell, where both the humanities and the technological arts were considerably developed and expanded. Under his leadership the Veterinary College and the Medical College came into existence. The enrollment increased from 1500 to 5700 and of the 20,000 Cornell degrees awarded up to that time, more than 17,500 had been awarded during his tenure. Cornell had become one of the great universities of the world.

Livingston Farrand, Cornell’s fourth president, took over on October 21, 1921, and remained in office until 1937. He was immensely liked by everyone connected with Cornell and all units of the campus considered him a friend. He acted as a catalyst for all the segments, enabling them to carry out their functions in peace and harmony. It was an “era of good feeling.”

Cornell’s fifth president, Edmund Ezra Day, served from 1937 to 1949. He was a man of considerable power, very serious, and extremely devoted to Cornell. Day was interested in social betterment and felt that the university was one of the main instruments for carrying this out. He served Cornell through the rough war years, organizing campus efforts to assist the overall war effort.

Research began to play an increasingly vital role in the affairs of Cornell. The administration became more interested in student matters. A fully-staffed medical clinic was established to care for students’ health. Intramural sports were encouraged and the intercollegiate sports prospered too. Day was a great innovator and his devotion to Cornell was directed towards preparing it for a future in an uncertain world, a job he did very well.

Dean Waldo Malott, our sixth president, served from 1951 to 1964. This was an era of unprecedented growth. Buildings sprang up on practically every available piece of land. Student services were expanded and many types of professional guidance services were created to meet the problems of the new type of student Cornell was educating. Cornell itself had changed significantly. Research began to seriously rival teaching as the University’s main task.

We are now under our seventh president, James A. Perkins. The University’s Centennial came soon after his inauguration. The Centennial Fund and resulting building program represent a commitment for the future greatness of Cornell.
It may be hard to picture a group of prize-winning livestock parading across Cornell's campus. It may be even harder to imagine a Cornell professor lecturing in a railroad car. Such scenes, however, have been familiar ones along Cornell's road of development and represent significant stages in the evolution of the University's extension program.

The exhibition and judging of cattle in front of Roberts Hall was a highlight of the original Farm Weeks, an annual program initiated by Dean Liberty Hyde Bailey in 1908.

The conception of this idea came from a meeting of the New York State Experimenters League held at Cornell in 1907. The discussion at this conference, attended by some 50 or 60 farmers to talk over their methods of work and their results, proved so beneficial that Dean Bailey was determined to extend a similar opportunity to more New York farmers the following year. Announcements throughout that winter designated the event as Farmers' Week and notices were sent out inviting all farmers to attend a full week of lectures and exhibits in February, 1908.

That year was especially favorable for the birth of such a venture for it marked the opening of Roberts Hall, Stone Hall, and East Roberts as the primary agricultural buildings on campus. These new structures would do much to supplement and eventually replace the dairy building then located in the north wing of Goldwin Smith Hall. During the sessions of this original project, students stood in the hallways, megaphones in hand, announcing meetings and demonstrations for each hour. Other students, as members of the ventilation committee, were assigned to each room to regulate windows according to the warmth of the discussion!

Apparently the affair was successful, for the attendance in 1908, of 800 persons, jumped to an estimated 2,000 the following year. This large attendance in 1909 led directly to the formation of several associations which were to become regular features of the Week. The Cornell Horticulture Union, the Home Makers' Conference, and the Students' Association of the New York State College of Agriculture, now called the Alumni Club, are a few of the organizations which grew out of the Farm Week idea.

The first years were formative years, each one initiating a new outlook or event. The annual agricultural stage, or public speaking contest, later named for A. R. Eastman, became an established competition. In 1909, speech topics ranged from seed regulation to a plea for a new type of country church—fewer denominations, less dogma and more real religion. The highlight of the Week in 1911 was the livestock show arranged by members of the Round-Up Club. A few years later, interest was centered around the opening of the first home-economics cafeteria in the basement of the department's new building. In 1914 a farm boys conference was organized, featuring lectures especially for the younger set.

Through the years the programs of the Farm and Home Weeks, as they were called after 1928, reflected the trends and advances in various phases of agriculture.

In earlier years, crop production was the main topic of interest. During World War I the primary question was related to the tractor versus the horse on the farm. The areas of concern followed the changing attitudes and needs of the people and the times,
and so they must, in order to make the experience valuable. The special emphasis placed on economic subjects in 1933 mirrored the close relations of the people and the College to their nation.

The Farmers' Weeks of the 1920's were highlighted by the first state-wide dramatic contest, cultural readings, and travel talks. Attractions and unique features a decade later included a broadcasting of lectures, extensive exhibits on plant disease-producing organisms and their control, and one by the rural sociology department on home-made games, puzzles, and recreational equipment. By 1939, the number of people registering for this "growing idea" reached 14,885.

Interest in the affair was also generated by the notable guest speakers whom Cornell sponsored. Outstanding personages adding their share to Farm and Home Weeks included such people as Franklin D. and Eleanor Roosevelt, Gov. Herbert Lehman, and Frances Perkins as Secretary of Labor.

During the time of the Second World War, the actual Farm and Home Weeks on campus were discontinued. However, their philosophy and purposes were carried out in an even more curious manner. In 1946 the "Cornell Farm and Home Special," traveling 2,000 miles on two railroads and reaching over 68,000 state residents, played the role of the communicator of University knowledge and research.

The forerunner of this "College on Wheels" actually originated in Iowa in 1904. This means of instructing farm people proved so popular that in 1912 the Delaware and Hudson railroad and the New York State College of Agriculture combined efforts to operate one. We can now begin to see the picture of a Cornell professor lecturing in a railroad car coming to life.

The Cornell Agricultural Special of 1912 consisted of a locomotive, a baggage car which also accommodated a demonstration cow, a Pullman sleeper, dining car, lecture car, and four demonstration cars. Professor M. F. Barrus, who accompanied the train originally, described its impact.

"This farm train received much favorable comment from individuals and the press. The stops were long enough to enable the visitors to attend the demonstrations and lectures in which they were interested and to receive answers to their many inquiries. The dairy demonstration car, the poultry car, and the domestic science car reached the vital needs of the farm communities visited. The novelty of the enterprise stimulated an interest that resulted in the attendance of large numbers of persons, who for the most part, felt they had received a benefit from the visit."

A similar venture was undertaken at the time of the First World War. The Farm and Home Week messages were taken to the people by means of the World War I Victory Train. Full of exhibits and demonstrations of a definite need, this train helped rally home forces in the war effort.

The Week itself as a campus affair was revived in April of 1918, and has been continued since, though its format and structure have been adjusted to the changing times.

In 1961, the name of the program was changed to Agricultural Progress Days, which met for three days. The theme that year was "Our Dynamic Agriculture" which consisted of a Dairy Day, Farm Forum Day, and Food Science and Industry Day.

In 1962, the theme of the program was "Agriculture's Golden Century", with emphasis being placed on agriculture's international dimensions, scientific progress in dairying, and agriculture's milestones.

The name of the program was changed to Agricultural Leader's Forum in 1963 when it met for one day. The theme that year was "Rural Resources Development in New York State."

The Agricultural Leader's Forum continues to meet one day each year, bringing top leaders in American agriculture to the campus. The theme in 1964 was "Speaking Out on the Great Issues of Agriculture," and in 1965 was "Food Marketing: Conflict and Common Interest."

Today the extension program of Cornell has reached a new horizon of service. Although the Farmers' Weeks and the Special Trains have been replaced by other extension projects, they will always be remembered as primary links between the people of the State and their land grant institution.
Robert H. Everitt of Schenectady has been elected president of the Alumni Association of the New York State College of Agriculture, Cornell University. Everitt, who was chosen at the Association's annual meeting at Cornell in March, succeeds Donald G. Whiteman of Adams.

Newly elected vice presidents include Steve M. Smith of Yorkshire, Francis R. Sears of Cortland, and Norman J. Smith of Old Westbury, Long Island.

Executive committee members are Whiteman, Donald G. Robinson of Castile, and Robert G. Greig, Red Hook.

Six students selected from colleges in the Northwest will participate in a summer research program in plant pathology at Cornell University. This 10-week program, under the supervision of Professor Carl Boothroyd, associate head of plant pathology, New York State College of Agriculture, has received support from the National Science Foundation since its beginning in 1961.

Eligible students are usually juniors, though sophomores and seniors not already accepted for graduate work can participate. The summer's program starts June 15 and Professor Boothroyd is accepting applications.

The program, according to Boothroyd, gives students actual research experience. After a briefing, each student selects his project, reviews the literature, and prepares an outline of goals and procedures. At the end of the 10 weeks, he submits a final report, discusses the results, and thus gains experience in scientific writing.

The New York State College of Home Economics at Cornell University in its 89th Annual Report, says that graduate study and advanced training are becoming increasingly important to employers.

Of the 500 requests for home economics graduates received by the College during 1963-64, 33 per cent of the positions required at least a master's degree, and 21 per cent required a doctoral degree.

College teaching positions accounted for 152 of the requests received; food service administration and dietetics positions, 106; and business areas, 53. The largest number of business opportunities were in the field of food testing and promotion. The importance of graduate work was stressed in this area.

Home economics specialists in television and radio, home management, clothing, nutrition, and related arts are in especially great demand.

The Third Egg Marketing Institute will be held at Cornell, May 4-5. Producers, processors and marketing specialists are expected to attend discussions on sanitation in breaking and freezing eggs, sophistication in advertising and marketing, and establishment of an East Coast clearing house for egg supply and demand information.

Sponsored by the College of Agriculture, the program will also include talks on egg consumption, grading and candling, and obtaining a bigger share of consumer dollars. Of the highlights will be a banquet, at which C. D. Carpenter will speak on egg sanitation.

The Elsie Van Buren Rice Home Economics Speech Stage was endowed in 1941 by the late James E. Rice, professor of poultry husbandry in the hope of increasing the home economics students' interest and ability to participate in public affairs.

Winners of the 1965 Elsie Van Buren Rice Home Economics Public Speech Stage; standing left to right: Lorraine Kahn, Joanne Pakel, Carol Green; sitting: Carol Mueller.

Winner of the 1965 Elsie Van Buren Rice Home Economics Public Speech Stage is Miss Carol Green, a junior in the New York State College of Home Economics. Miss Green, from Larchmont, N.Y., won the $125 first prize with her speech titled "From the Peanut Gallery."

Second prize of $75 went to Miss Lorraine Kahn, a junior from Forest Hills, N.Y., for her speech on "How and Why to Listen." The topic of the $50 third prize winner, Carol Mueller, a junior from Fairview Park, Ohio, was "Cornell Housing: Its Role in Undergraduate Life." Her speech on "Let's Propagandize about Home Economics" won Miss Joanne Pakel, a junior from Endwell, N.Y., fourth prize.

The Elsie Van Buren Rice Home Economics Speech Stage is held annually.
HERMAN A. BROWN, '23, Box 43, RF D #1, Salamanca, N.Y., worked for the U.S. Department of Agriculture from 1933 until his retirement in 1958. He is now operating a 50-acre farm. He is a member of the American Legion, the State Extension Service, the local grange, and a past director of the local bank.

FLORENCE HOLDEN, '28, Reed's Spring. Mo., presently owns and operates a wholesale rock and mineral shop in the Ozark Mountains. After graduation she taught science for 13 years in New Jersey, then worked in an airplane factory in California during World War Two. In 1946 she assumed her present position.

WILLIAM J. LOSEL '29, 95 Tulane Rd., Kenmore 17, N.Y., has been an instructor in horticulture at the McKinley Vocational High School in Buffalo, for the past 22 years. (with a break for five years service in World War II.) Previously, he had been a landscape draftsman and a park superintendent for the City of Buffalo.

NORMAN H. FOOTE, '32, 156 Hillside Road, Farmingdale, N.Y., is presently serving as chairman in the division of Agriculture and Ornamental Horticulture at the State University Agricultural and Technical Institute, Farmingdale, N.Y. Two of his four children graduated from Cornell; Sandra, '59, and son Norman, '63.

ORVILLE ENGST, '37, Cuyler, N.Y., has been a dairy farmer since 1948. Previously he had been director of Hillcrest School in Cannon, Connecticut. He and his wife are the parents of nine children ranging in age from six years to 23 years.

ROBERT C. BAKER, '43, 106 Auburn Road, Groton, N.Y., is presently a professor in the department of poultry husbandry at Cornell University. He is a member of the Lansing Lions Club, the Ithaca Rotary, the American Association of University Professors, and the American Association for the Advancement of Science.

JOSEPH D. MINOQUEU, '45, 122 Wait Ave., Ithaca, N.Y., has been associate director for the University Development Office at Cornell since 1950. He is serving on the Cornell University United Fund Cabinet, and is treasurer for the American Alumni Council, Class of '45.

WILLIAM R. O'HARA, 51, 10 Lilac Drive, Rochester 20, N.Y., since 1952, has been vice-president and a member of the Board of Directors of the Dutch Hollow Food Corporation. He is also a director of Waverly Creamery, Inc., a member of the Rochester Sales Executives Club, and the regional vice-president of the Comet Class Yacht Racing Association. At present, he is working on his masters degree in business administration at the University of Rochester.

MARY ANN SMITH BIEK, '54, 344 E. Townline Rd., Williamson, N.Y., has been a fourth grade teacher at the Williamson Central School since graduation. She is a member of the National Educational Association and the New York State Teachers Association, and a past president of the Williamson United Fund.

FRANK G. DENNIS, JR., '55, 69 John Street, Geneva, N.Y., is now Assistant Professor in Pomology at the New York State Experiment Station, Geneva. He received his Ph.D. from Cornell in 1961, and studied on a post-doctoral fellowship in France before assuming his present position.

JOSEPH D. PECK, '60, RF D #1, Saratoga Springs, N.Y., now owns and operates a 155-acre dairy farm. Active in farm affairs, he has been chairman of the Saratoga County Farm Bureau, as well as having worked with the Extension Service.

VIRGINIA WOLF SCHLEICH, '61, The Rockefeller Institute, New York 21, N.Y., is now doing laboratory work at the Rockefeller Institute where she and her husband Tom (Cornell, '60) are living while he works for his Ph.D. in chemistry.

JOHN G. ROGERS, JR., '63, Hempstead, N.Y., has a teaching assistantship at New Mexico State University. He instructs in several laboratory courses and does field work.
We Salute
CORNELL
As It Enters Its
SECOND CENTURY

No. 8 in a series from the New York State College of Agriculture, a contract college of the State University,
at Cornell University. Ithaca, N.Y.