



CORNELL CHRONICLE

Vol. 9 No. 13

Thursday, November 10, 1977

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Research to Give Agriculture Vigor

The need to feed a growing populace and the intellectual excitement of probing the mysteries of the life sciences will combine to provide the impetus to keep agricultural research strong and vigorous in the future.

This was a recurrent theme in the talks presented at yesterday's convocation of the State College of Agriculture and Life Sciences. It is one of the University events marking the inauguration of Frank Rhodes as president of Cornell University.

The college-wide convocation, titled "Heritage and Horizons," featured a presentation by Charles E. Palm, former dean of the college and the first Liberty Hyde Bailey Professor, and by six newly appointed Bailey professors: Martin Alexander, Harland F. Banks, Neal F. Jensen, William T. Keeton, J. Thomas Reid and Kenneth L. Robinson.

Palm outlined the history of the college and agriculture in the state with emphasis on the contributions and influence of Liberty Hyde Bailey. His talk was illustrated with slides prepared by Elmer S. Phillips, professor of communication arts, emeritus. The newly appointed Bailey professors discussed the challenges and opportunities facing the college in the years ahead.

J. Thomas Reid, a world-renowned authority in the field of animal nutrition, said that a major challenge and goal of future animal science studies should be that of re-engineering the meat producing animal to be more energy efficient and a superior source of food for humans.

"Our estimates indicate that if we could find the means to reduce the amount of fat stored in an animal's body by 5 to 10 percent while at the same time increasing by 5 to 10 percent the amount of protein stored, the energetic efficiency of producing food protein would be improved by 20 to 40 percent," Reid said.

He suggested that advances in immunological techniques and in efforts to regulate the rate of life processes will enable scientists to come closer to this goal.

"Needless to state, advances, even of a minor degree, in the knowledge of these subjects would improve the profitability of animal production to the producer, improve the nutritional value of these products and reduce their cost to the consumer," Reid said.

Martin Alexander, professor in the college's Department of Agronomy, told participants in the convocation that a major factor limiting food production is the availability of nitrogen, an essential component of all living systems.

"In the technologically advanced nations, much of the need for nitrogen is supplied by fertilizers synthesized by the chemical industry," said Alexander. "Plants, unfortunately, are surprisingly inefficient in using nitrogen in fertilizers," he added. "Much of the element is lost, either as nitrate in groundwaters

or as gaseous nitrogen to the atmosphere."

The Cornell microbiologist stressed that microorganisms have a unique role in the nitrogen nutrition of plants because some of these organisms carry out essentially the same function as the chemical industry. They take the nitrogen in the atmosphere, which is unavailable to higher plants, and convert it to a usable form.

Alexander suggested that there is great potential benefit to man in learning how microorganisms perform this process and in devising techniques to exploit the microbes' abilities. Such research is particularly valuable in regions of Africa, Latin America and Asia where nitrogen deficiencies are one of the chief reasons for low crop yield.

"We are moving ahead on several fronts, the highly practical and the unabashedly theoretical, the microbiological and the agronomical, in the field and the laboratory. We probably will not be successful in every area," said Alexander. "But we do expect meaningful outcomes from enough of these approaches to make the time and effort worthwhile."

Neal F. Jensen also commented on how basic research in the life sciences enhances the college's abilities to promote food production in discussing his area of expertise, plant breeding.

He said that continued efforts will be made to increase the yield of wheat and suggested that average yields in New York State will increase from 39.3 bushels per acre to about 50 bushels per acre.

"It may take another four decades to reach this level," said Jensen. "But this is not a disheartening prospect as it represents a 27 percent increase over already high yields."

A second major effort, said Jensen, will be increasing attention to improve crop attributes other than yield, such as matters of energy efficiency, ecology and nutrition.

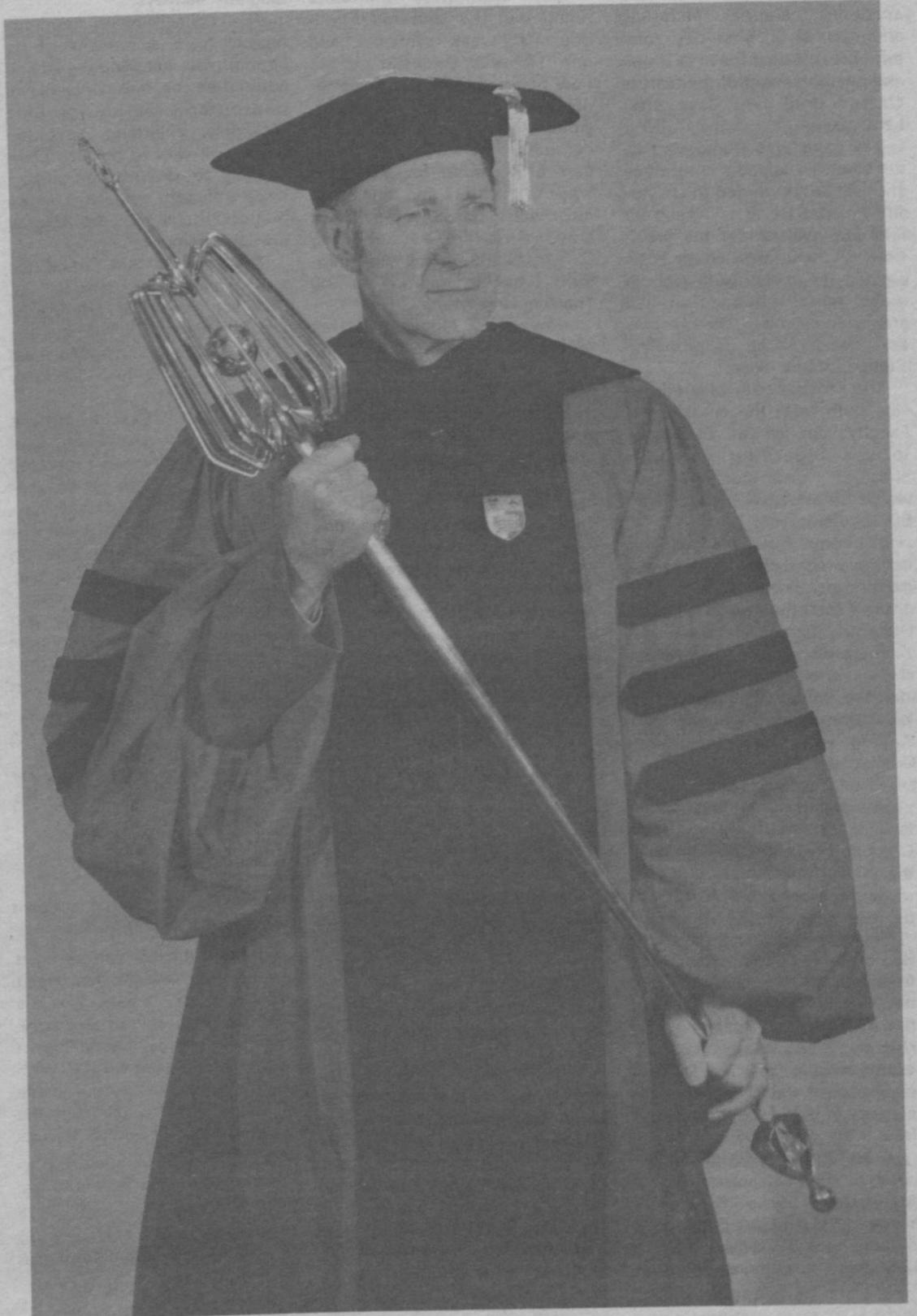
"I personally believe the future for cereal improvement is as bright and challenging as at any time in the past," said Jensen.

Harlan P. Banks, whose field of expertise is the history of plant life on earth, said that such studies may yield critical evidence on the time of origin of life on earth.

"The future holds the answer to the vital questions: when did the organized nucleus arise? when did nuclear division (mitosis) appear? when did reduction division (meiosis) appear? and, as a result, when did sexual reproduction arise?" said Banks.

He said researchers have come far in understanding the evolution of higher land plants from the very simple, original land plants. But the future will reveal the origin of land plants from ancestral aquatic groups.

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PRESIDENT FRANK RHODES IN HIS ACADEMIC ROBE, WITH THE MACE WHICH IS THE SYMBOL OF PRESIDENTIAL AUTHORITY.

Public Invited to Inaugural

A public ceremony at 11 a.m. today in Barton Hall is the major event in a week of special events on campus in celebration of the inauguration of Frank Rhodes as Cornell's ninth president.

The inauguration will be preceded beginning at 10:15 a.m. by an academic procession of

trustees, University officers and official delegates from other academic institutions from the Statler Inn, up Garden Avenue, to the east end of Barton Hall, where the faculty will join the procession.

Barton Hall was selected for the inauguration ceremonies in

order to accommodate all who wish to attend. All classes on campus have been suspended between 10:10 a.m. and 1:25 p.m. so that students and faculty may attend the inauguration. Faculty members are free to make their own adjusted schedules to accommodate students for work missed during the time classes are suspended, according to Byron Saunders, dean of the faculty.

Although the University will remain open during the inauguration, supervisors have been requested to allow all employees wishing to attend the ceremony time to do so.

A special bus will run between the A and conference parking lots on the north side of campus and Barton Hall to accommodate visitors.

The public also is invited to three inaugural receptions scheduled after the ceremonies in Barton Hall, where Rhodes and his wife, Rosa, will be available to meet and talk with visitors.

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Inauguration Events Today

8:45-10 a.m. Coffee hour and robing of delegates. Main and South Lounges of the Statler Inn.

10:15 a.m. Formation of academic procession. Statler and Uris Halls.

The academic procession will consist of Trustees, officers and faculty of Cornell University and official delegates of other academic institutions. Participants will wear academic attire.

10:45 a.m. Academic procession.

11 a.m. Inauguration of Frank H. T. Rhodes as President of Cornell University, Barton Hall.

Musical selections by the Cornell Orchestra and Chorus.

1 p.m. Luncheon for invited guests with President and Mrs. Rhodes, Statler Inn.

3:30-5:30 p.m. Two-hour receptions with exhibits by Cornell authors and artists — past and present — at three locations on campus. Mr. and Mrs. Rhodes will be present to receive guests at each as follows: Herbert F. Johnson Museum of Art 3:30-4 p.m.; Olin Library 4:15-4:45 p.m.; Mann Library 5-5:30 p.m.

Campus Council Meets

Calendar Changes Sought

The Campus Council has approved a plan recommending changes to be made in the academic calendar, including adoption of a three-day mid-term break during the fall session and postponement of the start of classes until two days after Labor Day.

The plan was formulated by the council's calendar committee and will be forwarded to University Provost David C. Knapp for final approval. Under the provisions of the council charter, the provost is given authority to make minor changes in the academic calendar. The committee considered all its proposed changes minor ones.

The provost has solicited advice both from the council and Faculty Council of Representatives regarding calendar changes. Calendar changes would be effective in the 1979-80 academic year.

The committee based many of its recommendations on a calendar preference referendum conducted by the now defunct University Senate in 1975.

The proposed change to start classes after Labor Day would increase students' opportunities for summer employment, according to Council members. Classes are now scheduled to begin on Labor Day.

Many council members spoke in favor of adopting a mid-term October break as way to ease the tension and pressure felt by students around the middle of the semester.

The plan also calls for a reduction of the fall term study period from four to two days (and one day in some years), retention of the Thanksgiving break in late November and completing final exams no later than Dec. 23. The arrangement would reduce class instruction during the semester from 13½ to 13 weeks.

A 1972 "Policy Guideline" issued by the Chancellor of the State University of New York York (SUNY) requires a minimum of 30 weeks instruction with no single semester

consisting of fewer than 14 weeks.

But, committee members noted that the University, with one 13½-week semester and one 14-week semester, is not now meeting either of these requirements, nor are other universities in New York State. The committee surveyed the calendars of six other major universities in the state and found that most start classes after Labor Day, finish exams before Christmas and have a short mid-term break in addition to the Thanksgiving holiday.

However, if reducing the fall term at Cornell to 13 weeks is "too much of a change," according to Ratner, an alternative to start the fall term on Labor Day, but still retain the mid-term break will be proposed.

The calendar plan also recommends starting and finishing the spring semester one week earlier, in order to avoid having Commencement and Memorial day falling on the same date. An alternative option to shorten the spring study period rather than start the semester a week earlier was also offered. No recommendations

were made for changes regarding the observance of religious holidays.

The council heard progress reports from a number of its committees, including the ad hoc committee on the University's photograph policy. Robert McGinnis, chairman, said the group will wait to hold an open hearing to discuss the policy, since a student complaint on the matter is still pending against the University.

The Financial Aid Committee will meet with Donald G. Dickason, dean of admissions and financial aid, to discuss the problems of keeping financial aid funding in pace with inflationary costs.

Representatives from the Residence Life and Safety and Security committees reported that a lack of legal aid services exists both for students experiencing landlord-tenant problems in off-campus housing and for victims of crime, particularly rape victims. The safety committee is also looking into the problem of alcohol abuse and the lack of sufficient educational crime prevention programs on campus.

New Potato Growing Facility Dedicated

Ground-breaking ceremonies were held Monday for a new potato production facility at the Uihlein Farm of Cornell University, the official foundation seed potato farm in New York State, located about two miles south of Lake Placid.

A laboratory and greenhouse will be built as a result of funds given by Mr. and Mrs. Henry Uihlein II of Lake Placid, who at one time grew certified seed potatoes and have been long-time supporters of the work of the State College of Agriculture and Life Sciences. Previously the Uihleins had given 317 acres to

the University for its present seed potato operation.

The new facility will be used to develop disease-free seed stocks for New York's \$70,000,000 potato industry, through a new technique known as meristem tissue culture. With this method, a microscopic piece of tissue is removed from the growing tips of potato sprouts and grown into plantlets on artificial media under sterile conditions. During their growth, these plantlets are thoroughly screened for freedom from disease organisms.

Agricultural Research Needed

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"Also the origin of the dominant plants on earth today, the flowering plants, has been regarded as a mystery," said Banks. "But intensive new research, re-analysis of older data, emergence of new techniques, and especially an interdisciplinary approach are combining to suggest that in the years to come we shall understand these plants in a way that has not been imagined."

William T. Keeton, professor of biology, discussed the need to maintain the freedom to explore the unknown and the esoteric, because the benefits of basic research can never be predicted. He cited his own research as an example of the unexpected ways in which basic studies can aid humanity.

"About ten years ago we set out to study the intricacies of pigeon navigation, a seemingly superfluous field of research," said Keeton.

"But in the course of this investigation we discovered various important aspects about the sensory capabilities of animals. We now know that birds live in a sensory world un-

known to man. And there is evidence indicating that birds can better sense the initial tremors of earthquakes than can the technology designed by humans.

"We never could have predicted this spinoff at the outset of our studies," stressed Keeton.

Kenneth L. Robinson viewed the heritage and horizons of the college from his perspective as an economist.

He noted that there is a growing disenchantment with using price as the principal allocator of resources, and a tendency to shift to non-price regulators of human activity.

"The introduction of new institutional forms designed to influence the price, ownership and use of land will demand increasing attention over the next 20 years," said Robinson. "Equity questions and control over ownership of land also are being raised more insistently."

"Under these circumstances, I strongly suspect we are likely to see some substantial modifications in the 'rules of the game' under which land can be acquired, sold or used."

Robinson said that another area in which he sees increased attempts to regulate or influence behavior is in food consumption.

"One can now glimpse the beginnings of a movement to limit choice in food manufacturing and consumption," he said.

"In raising these questions I do not want to suggest that I am endorsing the particular forms of intervention I have mentioned, or that I think their adoption is inevitable," stressed Robinson. "I do want to emphasize that we must prepare to deal with these issues in an intelligent manner."

"Our obligation in the college is to provide those in policy-making positions with information about the possible consequences of alternative policies, and in our teaching program, to make students aware of the new issues with which they are likely to be confronted."

Repeating a theme heard throughout the convocation, Robinson said, "Our ultimate responsibility is to provide students with the analytical skills and intellectual resources required to deal effectively with critical issues."

Job Opportunities At Cornell University

The following are regular continuing full-time positions unless otherwise specified. For information about these positions, contact the Personnel Department, B-12 Ives Hall. Please do not inquire at individual departments until you have contacted Personnel. An Equal Opportunity Employer.

Individuals on lay-off status will be given preference in referrals.
(*) Indicates new this week
(sh) Indicates shorthand required.

POSITION (DEPARTMENT)

CLERICAL POSITIONS

* Library Asst. V, A-19 (Univ. Libraries/Olin)
* Admin. Aide I, A-18 (Vice Pres., Facilities & Business Ops.)
Sr. Admin. Secretary, A-17 (Phys. Ed. & Athletics)
Sr. Editorial Asst., A-17 (CRSR)
Sr. Admin. Secretary, A-17 (Physics)
* Admin. Secretary, A-15 (Public Affairs)
Admin. Secretary, A-15 (CRSR)
Admin. Secretary, A-15 (Office of the Dean of Students)
Library Asst. III, A-15 (Univ. Libraries/Olin)
Admin. Secretary, A-15 (Health Services)
Admin. Secretary, A-15 (Applied & Engineering Physics)
Corres. Secretary II, A-15 (B&PA (9 mos./yr.))
Clerk, A-14 (College of Arch./Art/Planning)
* Dept. Secretary, A-13 (Electrical Engineering)
Dept. Secretary, A-13 (Civil & Env. Engineering)
Dept. Secretary, A-13 (Hotel Administration)
Dept. Secretary, A-13 (Oper. Res. & Ind. Engr.)
Dept. Secretary, A-13 (Geological Sciences)
Dept. Secretary, A-13 (Physics)
Dept. Secretary, A-13 (Computer Science)
Secretary, NP-11 (Cooperative Extension (NYC))
* Admin. Secretary, NP-8 (Cornell Plantations)
Admin. Secretary, NP-8 (NYC Program, 4-H Youth Dev. (NYC))
Admin. Secretary, NP-8 (Cooperative Ext., Sea Grant-Potsdam)
Clerk III, NP-7 (DCS-Admin., Vet College)
* Steno II, NP-6 (Floriculture & Ornamental Horticulture)
Steno II, NP-6 (NYSSILR)
Steno I, NP-5 (Diagnostic Laboratory)
Library Asst. II, NP-5 (Albert R. Mann Library)
Clerk II, NP-5 (NYSSILR)

SERVICE & MAINTENANCE POSITIONS

* Stockkeeper IV, A-18 (Physical Education)
Cook II, A-17 (Dining Services)
Housekeeping Spvr., A-16 (Residence Life)
Multitask Machine Operator II, A-15 (Graphic Arts Services)
Groundswoker, A-14 (Statler Inn)
* Custodian, A-13 (Residence Life)
Laundry Worker II, A-12 (General Services Laundry)
Union Piepitter (Maintenance & Service Ops.)
Experimental Animal Caretaker NP-8 (DCS - Large Animal Clinic)
Dairyworker I, NP-7 (DCS - Large Animal Clinic)

TECHNICAL POSITIONS

Sr. Electronics Tech., A-19 (Lab of Nuclear Studies)
Synch. Operating Tech., A-19 (2) (Lab of Nuclear Studies)
* Res. Technician, NP-14 (Natural Resources - Albany)
Maintenance Engineer I, NP-12 (Agriculture Engineering)
Research Tech. II, NP-10 (Diagnostic Laboratory)
* Lab Technician I, NP-8 (Botany, Genetics & Development)
Res. Support Spec. II, CPO4 (Lab of Nuclear Studies)
Res. Support Spec. II, CPO4 (Collective Tissue Research)
Res. Support Spec. II, CPO4 (Food Science & Technology)
Res. Support Spec. II, CPO4 (Avian & Aquatic Animal Medicine)
Research Associate I, CPO3 (Physical Biology)
Research Support Spec. I, CPO3 (Chemistry)
Applications Programmer I, CPO3 (Office of Computer Services)

ADMINISTRATIVE POSITIONS

Director, CPO9 (Office of Computer Services)
Director of Utilities, CPO8 (Facilities & Business Operations)
Chief, Plant Operations, CPO7 (Buildings & Properties - Geneva)
* Development Officer II, CPO6 (University Development)
Counselor Therapist II, CPO6 (Health Services)
Student Dev. Spec. III, CPO5 (NYSSILR)
Manager Technical Services, CPO5 (Civil & Environ. Engineering)
Auditor II, CPO5 (Auditor's Office)
Admin. Manager, CPO5 (Physics)
Asst. Dean, SDS III, CPO5 (Basic Studies - Engineering)
Health Careers Coord., SDS III, CPO5 (Health Careers)
Systems Analyst III, CPO5 (Institutional Planning & Analysis)
* Personnel Associate II, CPO4 (2) (Personnel Services)
Asst. Dir., SDS II, CPO3 (University Unions - WSH)
Asst. Dir., SDS II, CPO3 (University Unions - Noyes)
Asst. Production Director (University Press)

ACADEMIC/FACULTY POSITIONS (Contact Department Chairperson)

* Sr. Research Associate (Chemistry)
* Asst. Prof. of Botany (Section of Botany/Genetics/Dev.)
* Asst. Prof. of Ecology (Section of Neurobiology & Behavior)
Asst. Prof.-Political Theory (Dept. of Government)
Asst. or Assoc. Prof.-Health Care Econ./Finance, w/out tenure (Graduate School of Bus. & Public Admin.)
Asst. or Assoc. Prof.-Organizational Behavior, w/out tenure (Graduate School of Bus. & Public Admin.)
Asst. or Assoc. Prof.-Marketing w/out tenure (Graduate School of Bus. & Public Admin.)
Asst. or Assoc. Prof.-Accounting w/out tenure (Graduate School of Bus. & Public Admin.)
Asst. or Assoc. Prof.-Finance w/out tenure (Graduate School of Bus. & Public Admin.)
Asst. or Assoc. Prof.-Public Finance w/out tenure (Graduate School of Bus. & Public Admin.)
Asst. Prof.-Infrared Astronomy (Dept. of Astronomy)
Asst. Prof.-Experimental or Theoretical Radio Astronomy or Radar Astronomy (Dept. of Astronomy)
Sr. Ext. Associate, CPO7 (Dept. of Agric. Engineering)
Ext. Associate III, CPO5 (Human Dev. & Family Studies)
Research Assoc., III, CPO5 (Human Dev. & Family Studies)
Ext. Associate I, CPO3 (Plant Pathology)
Asst. Prof. (or above) (3) (Cornell Law School)
Ext. Associate (Dept. of Agronomy)
Bacteriologist (Vet Microbiology)
Asst. Prof. Physics (Lab of Nuclear Studies)
Asst. Prof.-Bioorganic Chemistry (Chemistry)

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Thursday, November 10, 1977

Concerts Feature Student Composers

Music by Cornell undergraduate and graduate composers and their mentors will be presented in three concerts at Barnes Hall auditorium this weekend (Nov. 11-13). All are free and open to the public.

The events are part of the 1977-78 Festival of Contemporary Music, which is under the direction of Robert Palmer, the Given Foundation Professor of Composition, and a student faculty committee.

The first two programs will consist of original music by the student composers. The Friday concert at 8:15 p.m. will include works by Valerie Berk, A. Ceconi-Bates, Hjalmar Ragnarsson, John Hilliard and Daniel Dorff. On Saturday at 8:15 p.m. works by Ceconi-Bates, Duane Heller, David Nq Quinn, Jack Grey and Samuel Pellman will be performed.

On Sunday at 4 p.m. works by Cornell faculty composers Palmer and Karel Husa will be performed. The Manhattan String Quartet will play Palmer's String Quartet No. 3. The quartet

performers are Eric and Roy Lewis, violins; Rosemary Glyde, viola and Judith Glyde, cello. All are graduates of the Manhattan School of Music.

Since its inception in 1970, the Manhattan Quartet has played throughout the United States and Europe and has been involved with music in colleges and communities, through Artists Development at State University of New York at Binghamton (an affiliate sponsor of the concert), and as artists-in-residence at Cornell and Grinnell College.

Marice Stith, director of bands at Cornell and Brian Israel, a member of the faculty at Syracuse University, will perform Husa's Concerto for Trumpet and Piano. James Parakilas and Howard Pollack, graduate assistants in music at Cornell, will perform Husa's Eight Czech Duets for Piano Four-hands, a series of miniatures utilizing folk melodies and unusual rhythms. Parakilas will also play the "Elegie" for piano.

Plantations Offers Several Courses

"Herbal Literature and Resources," a short course designed to help those with an interest in herbs find books and other resource material, will be held from 7 to 9:30 p.m. Tuesday, Nov. 22, at the Cornell Plantations.

The course, taught by Audrey O'Connor and Pam Mackesey, will include bibliographies on such topics as the British herbalists, American Indians and plants, colonial gardens and restorations and culinary herbs. The course fee is \$4.

Other offerings in the Cornell Plantations educational program this month and next are:

"Herbal Literature and Resources," taught by Audrey O'Connor and Pam Mackesey, will help students find the books and other educational resource material needed to pursue an interest in herbs. Bibliographies on such topics as the British herbalists, American Indians and plants, colonial gardens and restorations and culinary herbs will be available to class members. The course will meet from 7 to 9:30 p.m. Tuesday, Nov. 22. The fee is \$4.

"Arranging Christmas Greens," taught by Jane Hardy, is an opportunity for students to create a Christmas wreath and "kissing ball" from evergreen foliage with accents such as conifer cones, dried fruits and berries. The class will meet from 7 to 9:30 p.m. Tuesdays, Dec. 6 and 13, and all course materials are covered in the fee of \$12.

"Old Fashioned Christmas Decorations," taught by Ronn Brown, will allow students to make four traditional Christmas decorations, such as the St. Barbara's wreaths that hang on doors in Italy, Asia Minor and the Near East at Christmas; star chains or spider webs of yarn that decorate trees in Slavic countries; Swedish Julebuckas (Scandinavian equivalents of our reindeer) and other tree ornaments from natural ingredients. Classes will meet Wednesday evenings, Nov. 30 and Dec. 7, and Thursdays, Dec. 1 and 8. Space is available in either section. The fee is \$12.

Advanced registration and payment of fees are required for all courses. Students can register by mail or in person at the Plantations Office, 100 Judd Falls Road. The Plantations telephone number is 256-3020.

Friends of Music Plan Strauss Ball

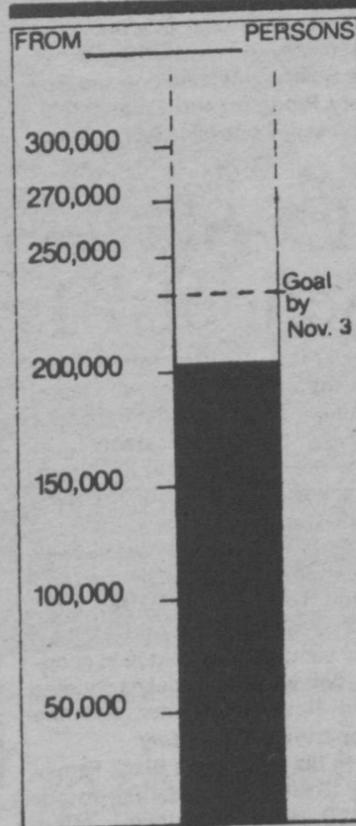
The Friends of Music at Cornell will sponsor a Johann Strauss Ball at 8:30 p.m. Saturday, Nov. 19, in the Herbert F. Johnson Museum of Art. The purpose of the joint musical and social event is to bring together the local Friends of Music with a newly formed nationwide alumni group known as the Cornell Friends of Music.

Faculty members of the Department of Music and students will play waltzes and polkas by Strauss. Those planning to attend are invited to dress in festive garb.

Attendance to the ball is by invitation only for members of the two groups of "Friends of Music," but anyone wishing to become a member of either group should contact Vivian Laube at 256-4760.

The Friends of Music at Cornell was formed in 1951 for the purpose of providing financial assistance and moral support to the activities of the music department at Cornell.

CORNELL UNITED WAY CAMPAIGN



Cornell will go "over the top" if everyone turns in his or her pledge card according to Cornell United Way chairman Jim Huttar. To date the University has raised \$202,000, or 86 percent of its goal.

'To Improve Communications'

Awareness Training Set

Understanding how the other person feels—and how you feel about the other person—are important parts of relationships between supervisors and employee. They are also particularly important parts of a successful affirmative action program.

"Awareness training" is one way to increase understanding, according to Gerald S. Thomas, director of personnel develop-

In addition to the Strauss Ball, the music department will conduct a tour of campus facilities for music and present a concert by the Cornell Chorus from 4-5 p.m. Saturday under the direction of Thomas Sokol, professor of music.

Sermon: 'The Ready Heart'

Herbert W. Richardson, professor of religious studies at St. Michael's College, University of Toronto, will be the speaker at the Sage Chapel convocation at 11 a.m. Sunday, Nov. 13. His topic will be "The Ready Heart."

Richardson served on the faculties at Bucknell and Harvard Universities before going to St. Michael's in 1968. Since then he has been visiting professor at several seminaries and universities across the country.

He has studied in the United States and Europe and received

Fast to Highlight Causes of Hunger

World hunger is a complex problem which is the product of maldistribution of wealth and resources and enhanced by bad weather and rising populations, according to the Cornell Coalition for the Right to Eat.

The coalition is asking persons to join a Fast for a World Harvest on Wednesday, Nov. 16, and to contribute funds for people in Africa, Asia and Latin America.

The fast is being organized nationwide by colleges, high schools, religious groups and individuals. The money raised will go to organizations such as Oxfam, a non-profit, international agency which funds self-help development programs in underdeveloped nations.

There will be displays on the problems and causes of world hunger also on Wednesday in

Willard Straight Hall. The coalition is urging people to fast all day and donate the money they would spend on food. Collection tables will be in the student union buildings. Students may turn in their Co-op Dining Cards for the day. Cornell Dining Services then makes a donation on behalf of students for each card.

Terry Schettini, a member of the Coalition for the Right to Eat said although fasting is only a symbolic act, the money raised from the effort goes to organizations, such as Oxfam, "which have reputations for approaching the root causes of poverty rather than merely temporary relief of chronic disasters.

Gurowitz Urges Support of Fast

University Vice President for Campus Affairs William D. Gurowitz has made the following statement in support of the Fast for the World Harvest.

"Cornellians are being asked to participate next week in activities concerned with world hunger. Fasting and fund-raising are two of the activities which will draw attention to the problems of world hunger.

"World hunger is among the most serious, and the most complex, of global problems. By par-

ticipating in the events of Nov. 16, fasting and contributing the money which otherwise would have been spent for food, we can demonstrate our concern and our determination to help find solutions to the problem of world hunger.

"I call upon all members of the Cornell community to participate in the activities of the 'Fast for the World Harvest' being sponsored next Wednesday by the Coalition for the Right to Eat."

ment at Cornell. "Improving sensitivity to human differences and avoiding biases and distortion in communication are essential for supervisors," Thomas said.

The University sponsors training programs to increase awareness. The next is scheduled for Nov. 17 and 18. Awareness training programs are designed for supervisors, but any University employee is invited to attend, Thomas said. Employees and their supervisors should not attend the same session, however.

Other programs are scheduled for Dec. 15 and 16 and Dec. 18 and 19. Each session is limited to 24 employees. To reserve a place, employees should telephone Elizabeth Green, 256-4869. There is no charge for the program, but those attending should have the approval of their supervisor.

The training programs are offered in partnership with the National Alliance of Businessmen. Sessions normally be-

gin at 8:30 a.m. and last until 12:30 p.m. on each of the two days of the program. There are case studies and exercises to improve sensitivity to individual differences, Thomas said.

"The sessions are non-threatening," he said. "Participants can learn about their own biases without revealing these biases to others. Sessions provide the tools to help you change yourself."

Thomas said awareness training is part of the approach to introduce the Cornell community to the University's new Affirmative Action Plan. The plan received a "kick-off" from the University's senior officials last week. Departmental training sessions on the plan also are planned.

Awareness training can help people to understand others better, but more importantly to understand themselves better, according to Thomas. "For example," he said, "a male employee might resent a female supervisor—for reasons he doesn't even understand. Awareness training would make him more aware of the resentment and its causes. These are essential first steps toward a more productive working relationship."

Meeting places for the three scheduled sessions will be determined later, Thomas said. Additional sessions will be scheduled as employee interest requires.

Music is provided by the Sage Chapel Choir under the direction of Donald R.M. Paterson, associate professor of music, University Organist and Sage Chapel Choirmaster.

CORNELL CHRONICLE

Published weekly and distributed free of charge to Cornell University faculty, students, staff and employees by the Office of Public Information. Mail subscriptions, \$13 per year. Make checks payable to Cornell Chronicle Editorial Office, 110 Day Hall, Ithaca, N.Y. 14853. Telephone 256-4206. Editor, Randall E. Shew. Managing Editor, Elizabeth Helmer. Circulation Manager, Barbara Jordan.



Comment

Chronicle Comment is a forum of opinion for the Cornell community. Address comments to Elizabeth Helmer, Managing Editor, Chronicle, 110 Day Hall. Letters submitted for publication in the Chronicle must be typed, double space, with 75 characters to a line, no more than 600 words in length. The Chronicle intends to adhere to this limit because of space and financial restrictions. The deadline is Monday noon at 110 Day Hall. Letters addressed to someone other than the editor, personal attacks against individuals or unsigned letters will not be printed.

'Speaker's Rights Must Be Protected'

Editor:

None of the critics of cameras as a deterrent against disruption have suggested any alternatives which they would find legitimate. Professor Latham's letter to the *Chronicle* (Oct. 20) is typical in urging the administration "to find other ways," but he can't specify any. This sort of thinking deserves to be called "ritualistic liberalism."

Cornell's camera policy was passed five years ago, yet no student protestors were identified at the Ky forum, even though the speaker never was able to give his prepared address and was soon forced to obey the shouted demand that he leave the platform.

Are camera-critics content with this alternative? If so, they have sacrificed actual free speech to their concern for a hypothetical "chilling effect" cameras might have on non-disruptive protestors, who are assumed to be too fearful, apparently, to be responsible for their own political identities and to insist on making them public.

The point is to consider seriously the alternatives. At Yale a few years ago a massive show of police force, city and campus, was necessary to protect a highly controversial speaker on racial issues. At the University of Michigan, when President Rhodes was still there, city police were called upon to remove Arab demonstrators from the hall to prevent them from shouting down the President of Israel. Do camera-critics prefer this alternative? Wouldn't they say that so many uniformed police produced a menacing "chilling effect?" Would any practical means of protecting a speaker and punishing violators of an open forum escape their charge of having a "chilling effect?"

Unless serious alternatives are suggested, however, we are permitted to suspect that such critics are not very serious about the speaker's rights, which have been "chilled" to the freezing point on several occasions. Incantation of the "chilling effect" phrase is rapidly becoming a piece of partisan cant, obscuring rather than clarifying the real issues about protecting free speech on campuses.

The crucial questions about cameras are when and how they are used. They should never be used when there is no danger to the speaker's rights. They should never be used to identify non-disruptive demonstrators. The films should be destroyed if no

Barr

Dr. David Preswick Barr, professor emeritus of medicine at Cornell University Medical College and former physician-in-chief of The New York Hospital, died on Wednesday morning, Nov. 2. He was 88 years old.

He was born in Ithaca, graduated from Cornell University in 1911, and received his M.D. degree from Cornell University Medical College in 1914. Two years later he was on the Cornell faculty.

charges are made against disruptors. I do not know if any danger was present warranting filming at the Friedman lecture, but Professor Latham doesn't claim these guidelines were violated.

If many speakers at Cornell in the last decade had not been denied their rights as speakers at open forums, then of course there would be no unpleasant need to identify any protestors at all. Given that dismaying history, however, camera-critics have an intellectual and moral obligation to take seriously the practical problems of identification and punishment. Otherwise no deterrent would exist against attempts to curtail the rights of controversial speakers. The problem is not one that contributes to the gaiety of nations, but history shows that when liberal professors don't accept this obligation, illiberal legislators are only too willing to do so.

*Cushing Strout
Ernest I. White Professor
of American Studies and
Humane Letters*

Physicist to Speak On 'Young Einstein'

Jagdish Mehra, professor of physics and the history of physics at the Solvay Institute of the Free University of Brussels, will speak on "The Young Albert Einstein" at 7:30 p.m. Tuesday, Nov. 15, in 700 Clark Hall, Cornell University. The lecture is free and open to the public.

Mehra, whose research interests are theoretical physics and the conceptual development of physics in the 20th century, is

Seminars Set to Explain New Computer Acquisition

The Office of Computer Services (OCS) will soon have a Floating Point Systems 190L Array Processor, ordered in cooperation with a group of physical scientists. The Array Processor is to be attached to the IBM 370/168.

OCS is sponsoring two seminars for persons interested in the Array Processor. The first

Students Receive Thanks For Village 'Spook Watch'

Six Cornell students have been credited with helping keep Halloween vandalism at a record low in Cayuga Heights this year.

Heights Police Chief Harlin R. McEwin has presented the Cornell Amateur Radio Club with a Certificate of Appreciation for its part in what he called "Spook Watch 1977." Five members of the club patrolled the community from 6 to 11 p.m. in their radio equipped private cars. They called information into a sixth

Amory Lovins, a controversial scientist labeled by some as an "energy radical," will speak on "Energy Strategy: The Road Not Taken" at 8 p.m. Tuesday, Nov. 15, in the Memorial Room of Willard Straight Hall at Cornell University.

His presentation is the second of this year's Eco-Justice Forum Series. Raymond Bowers, professor of physics and director of the Science, Technology and Society Program, and Robert Pohl, professor of physics will respond

'Ex-Slaves and Their Schools' Is Topic

Herbert G. Gutman, whose recent book disagrees with many traditional views of the impact of slavery on the black family in America, will speak at 4:30 p.m. Monday, Nov. 14, in 110 Ives Hall, Cornell University.

Gutman's topic is "Using Their Freedom: The Ex-Slaves and Their Schools, 1861-1867." His talk is sponsored by the University Lectures Committee in cooperation with the Africana Studies and Research Center and the Department of History.

In his book, "The Black Family in Slavery and Freedom, 1750-1925," Gutman offers evidence that enslavement and poverty did not shatter black family ties, an argument put forth by Sen. Daniel P. Moynihan, among others.

Gutman, a Distinguished Visiting Professor at Smith College this year, has done extensive

research and writing on such topics as labor history and Afro-American history. He has written that the cultures developed by workers and slaves have often been used to adapt to circumstances and crises in their history.

to Lovins' talk. The event will be moderated by Chandler Morse, professor of economics, emeritus. Questions and discussion will follow these presentations.

Lovins is both an advocate and architect of an energy strategy which he labels "soft energy." Soft energy technologies include solar heating systems, windmills and digesters that convert agricultural wastes into fuel. On the other hand, "hard" energy technologies include nuclear power,

coal burning plants, shale oil recovery systems and oil and gas pipelines—all of which Lovins argues against.

His thesis also focuses on conservation rather than expanded production, renewable energy resources rather than depletable resources and small-scale, decentralized energy sources rather than large, centralized systems. His arguments for the "soft energy" path encompass not only energy issues, but include the economic, social and political consequences of the alternatives as well.

Lovins first wrote of his soft vs. hard energy theories in the October 1976 issue of "Foreign Affairs." The article provoked national debate. While some critics have called him "the enfant terrible of the energy left," his soft energy thesis has provoked Congressional inquiries and official government studies.

Lovins is an American but spends much of his time in England. He is the British representative of Friends of the Earth, an international environmental group based in San Francisco. He studied at Harvard College and Magdalen College, Oxford. He held a three-year fellowship at Oxford starting in 1969. Lovins has served as consultant for non-profit, semi-governmental and governmental agencies around the world, including the Energy Research and Development Administration.

He is the author of three books: "World Energy Strategies," "Non-nuclear Futures: The Case for an Ethical Energy Strategy," and "Soft Energy Paths: Toward a Durable Peace."

Lovins' visit is co-sponsored by the Eco-Justice Project of the Center for Religion, Ethics and Social Policy, the Program on Values and Valuing and Ecology House.

Job Opportunities

Continued from Page 2

- Faculty Position (Section of Medicine, Vet College)
- Asst. Professor (Electrical Engineering)
- For positions in Cooperative Extension, contact the Personnel Recruitment Section, 212 Roberts Hall
- *Coop. Ext. Agent, Direct Marketing (Ithaca, Cornell)
- *Coop. Ext. Agent, Agriculture (Herkimer, N.Y.)
- *Coop. Ext. Agent, Agriculture (Hamden, N.Y.)
- *Coop. Ext. Agent, Home Economics (Cairo, N.Y.)
- *Extension Associate, Direct Mktg (NYC)
- *Coop. Ext. Agent, Agriculture (Hudson, N.Y.)
- *Coop. Ext. Agent, Home Economics (Delhi, N.Y.)
- *Coop. Ext. Agent, Agriculture (Westport, N.Y.)
- *Coop. Ext. Agent, 4-H (Middletown, N.Y.)
- *Coop. Ext. Agent, Home Ec. (Canton, N.Y.)
- *Coop. Ext. Agent, 4-H/Home Ec. (Bath, N.Y.)
- *Coop. Ext. Agent, Comm. Res. Dev. (Owego, N.Y.)
- Coop. Ext. Agent, Agriculture (Rochester, N.Y.)
- Coop. Ext. Agent (Alton, N.Y.)
- PART-TIME & TEMPORARY POSITIONS
- Temp. Service Clerical (Media Services (temp. p/t))
- Temp. Service Clerical (Inst. Planning & Analysis (temp. p/t))
- Temp. Service-CRT Operator (2) (Animal Science (temp. p/t and temp. f/t))
- Program Aide I, NP-5 (Coop. Extension (temp. f/t) (NYC))
- Steno I, NP-5 (Agricultural Economics (temp. p/t))
- *Sr. Editorial Asst., A-17 (University Publications (perm. p/t))
- Admin, Secretary, A-15 (Computer Science (temp. f/t))
- Admin, Secretary, A-15 (College of Arch./Art/Planning (perm. p/t))
- *Library Asst. III, A-15 (Univ. Libraries/Olin (temp. f/t))
- *Library Searcher I, A-13 (U. Libraries/Olin (perm. p/t))
- Library Supervisor, A-13 (Univ. Libraries/Music (perm. p/t))
- *Manuscript Arranger I, A-13 (Univ. Libraries/Olin (temp. p/t))
- *Library Searcher I, A-13 (Univ. Libraries/Olin (p/t))
- Records Clerk, A-11 (Health Services (temp. p/t))
- Typist, A-10 (Athletics & P.E. (temp. p/t))
- Custodian, A-13 (Statler Housekeeping (temp. f/t))
- *Custodian, A-13 (Health Services (perm. p/t))
- Lab. Tech. I, NP-8 (Food Science (1 year))
- *Temp. Service Tech. (Animal Science (temp. f/t))
- Temp. Service Tech. (Biological Sciences (perm. p/t))
- Temp. Service Tech. (Equine Drug Test., Yonkers/Roosevelt (temp. f/t))
- Res. Support Spec. III, CPO5 (Human Dev. & Fam. Studies (temp. f/t))
- Director, Continuing Educ. Ctr. SDS III, CPO5 (Office of the Vice Provost (perm. p/t))
- Regional Director, CPO4 (Univ. Dev.-Cleveland (perm. p/t))
- Applications Programmer I, CPO3 (Computer Services (temp. p/t))
- Teaching Support Aide CPO2 (2) (Community Service Education (temp. p/t))

Thursday, November 10, 1977



Joan Gibson '81, successfully halters and leads a cow during the first laboratory in Animal Science 100.

Arts College Students Enjoy Animal Science



Lauren Woods '81 has this sheep under control.

Herding pigs, handling sheep and haltering cattle are lessons learned in the first laboratory of Animal Science 100 at Cornell. So what are four students from the College of Arts and Sciences, one Human Ecology senior and a natural resources major doing in a class of 200 preveterinary medicine and farm science majors?

For one thing, they all say they are enjoying it. But their reasons for taking the course vary from taking it as an elective because they love animals or are considering transferring to the College of Agriculture and Life Sciences to concern with feeding a hungry world.

Susanna Davy, a senior in Natural Resources, explains that she has always loved "hanging around farms." She has worked with large animals, primarily horses, and, until recently, was planning to go into environmental education for special children. But a statement by one of her professors changed that. He told his students that "people should branch out. If you are studying chemistry and you want to take a course in Chinese poetry, take Chinese poetry." Susanna had wanted to take an animal science course and the professor's words gave her the impulse needed. Now she's not sure where she's headed, but she is enjoying the diversity of her studies.

Janet Ostrander, a senior in Human Ecology studying nutrition and the hospitality industry, is also taking Animal Science 100 as an elective because she had thought about being a veterinarian while in high school. She comments, "I am enjoying my first contact with farm animals and find the course is giving me a good review for nutrition studies. It also gives me a perspective on the food chain." Two of the students are finding the course a help in their interest in the problems of feeding the world. Mary Lummis, a freshman from Greenwich, Conn., "which is not farm country," she acknowledges, has always wanted to be a veterinarian, but "I'm hedging my bets. I enrolled

in the College of Arts and Sciences to see how tough Cornell is. Being able to take courses in the other colleges is what attracted me to Cornell."

She spent two summers at the American Farm School in Greece, where she became interested in the world food problems and doing something about them. Her interest in veterinary medicine has not lessened, but she wants to broaden her experience. She feels a background in soils, crops and animals will help her work on agricultural needs in developing countries.

Marcia Smith, a transfer junior, is enrolled in biological sciences. She has become interested in the problems and solutions to the growing world population and feels that "agriculture must make tremendous strides to meet the demands of the increasing population. I want to know what the problems are and whether we should be using animals for food; how efficient is that use of the land?" She finds Animal Science 100 is providing her with the general background she is seeking. Also, the course helps her in Animal Nutrition 410. As she puts it, "When the processes taking place in a cow's rumen are being discussed, I need to know what the rumen is. Animal Science 100 is telling me."

Nancy Cranker, a sophomore in biological sciences, is trying to decide which direction to go in her studies between ecology and animal science. She has always liked animals, has had the usual small pets and worked occasionally on relatives' farms, but she felt she needed to have more experience to make a decision.

Bob Reed, a sophomore from New Orleans, La., has a very dear idea of what he wants to do. He is registered in the College of Arts and Sciences but considers himself a preveterinary student. He explains that "being an out-of-stater, it was easier to get into the College of Arts and Sciences than into the State College of Veterinary Medicine."



Louise Pool '81 weighs a sheep.



Mary Schwarz '81 has a sheep in a position from which it can't get away.



Lorna Klotzbach '80 is not winning in the tug-of-war with a Cornell cow.

Cornell's Financial Situation Discussed

In this article, and in a second installment, the Chronicle presents some basic aspects of Cornell's financial situation. This week we look at the status of endowment funds, the use of capital to finance operations, Cornell's debt and the cost of recent additions to its physical plant. Next week we look at annual revenues and expenditures.

Chart I (Endowment and Similar Funds) depicts the status of Cornell's endowment funds over the past five years. The top line gives the full picture — since 1972, the market value of endowments has declined about \$7 million, from \$277 to \$270 million. Taking into account the effect of inflation, the impact of the drop is even greater than it appears.

The next two lines show the components of the top line. First, true endowment (line 2) has grown. True endowment is that from which the principal cannot be spent, but only dividends and interest. In other words, if you put \$100 into a savings bank at 6 per cent interest, you would earn \$6 each year without touching the \$100. The \$100 is the principal, and the \$6 the interest. True endowment has grown because the principal remains intact while donors continue to add funds to principal.

Funds functioning as endowment (line 3) are those whose principal can be spent as well as interest and dividends. Although there have been additions to principal from gifts, the market value has declined for two reasons: 1) there have been stock market losses in certain years, and (2) the University has had to use some capital.

There are three purposes for which capital has been used: (a) to cover operating deficits, (b) to pay for special capital projects and (c) as a result of the "total return" investment policy. The use of capital is discussed more fully later on. In 1972, funds functioning as endowment had a market value of \$124.1 million. In 1977, the value was down more than \$30 million, to \$92.8 million.

The "total return" policy is an investment strategy to provide more income from capital appreciation than could be

obtained, in theory, from interest and dividends alone. A certain percentage of the average market value, calculated over the last five years, is taken out of the principal of Cornell's funds functioning as endowment and paid to operating expenses.

The percentage to be paid is chosen based not only on expectations for dividends and interest, but also gains in the stock market — capital appreciation. The higher the percentage chosen, the more capital gains there must be to cover the payments. If capital gains, and interest and dividends, do not cover the amount expected when the percentage was set, the payments must be made by removing some of the invested capital, since operating program commitments have already been made in the annual budget based on the expected payments from the total return policy.

Such a policy is sound, therefore, as long as the economy is healthy and the stock market growing. But if the economy declines and there are losses eventually the policy must be changed, and the percentage reduced to reflect economic conditions.

Using the \$100 example, if instead of earning only \$6 interest from a savings account each year, you decided to buy and sell stocks, your principal could increase in market value, rather than remain at \$100 — assuming you were a good investor and the market was advancing steadily.

If the market value of your investment grew to \$150 and you had decided to pay yourself 6 per cent of the market value of your investment each year, you would have an annual income of \$9, and you would also have more principal. You might even decide to pay yourself more — 10 per cent for example — to get an income of \$15, if you were confident the principal would continue to grow enough to support that much "pay-out."

If the value of your investments declined, however, and you continued to pay yourself \$6 each year, each year you would have less principal left. You would eventually run out of principal. The higher the annual amount you paid yourself, the faster your funds would be depleted.

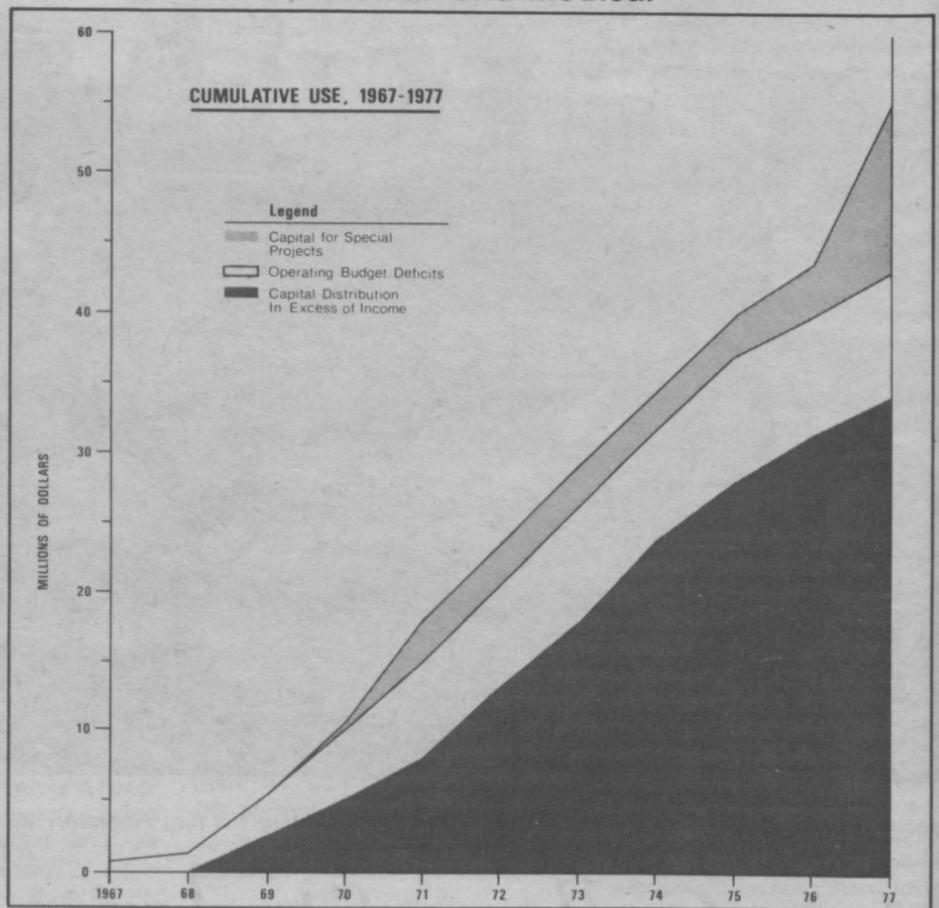
Unfortunately, the gains anticipated for Cornell when the total return policy began have not materialized because of a sluggish stock market and economy. At the direction of its Board of Trustees, Cornell has been reducing the amount it pays itself each year out of capital to reflect these economic conditions.

The fourth line in Chart I, "living trusts" reflects pledges of bequests. A bequest is a gift pledged to be paid upon the death of the donor. Living trusts are an increasingly popular means of donating to Cornell. As the rising line for these funds shows, they have grown from \$7.8 million in 1972 to \$11.1 million in 1977. Living trust funds cannot be used by the University — either interest or principal — until the death of the donor and one named beneficiary, if any. In the meantime, the University manages the funds and pays the earnings to the donor. The funds are to some extent a measure of future endowment.

Chart II shows the use of capital funds over a 10-year period at the medical college and the endowed colleges at Ithaca. As you move from left to right the lines rise, because the chart is cumulative — this year's use of capital is added to those of previous years.

The chart is divided into three parts: (a)

II. USE OF CAPITAL FUNDS Endowed and Medical



SOURCE: Cornell University Budget, 1977-78, p. 75; University Accounting Department

capital distribution in excess of income (resulting from the total return program), which is the largest portion at the bottom; (b) operating budget deficits, the white space in the middle; and (c) capital for special projects, the portion on top.

Since 1967, Cornell has spent more than \$55 million of its capital funds, \$42 million for the endowed colleges at Ithaca, and \$13 million for the medical colleges.

The total return investment policy accounts for by far the largest portion of this amount — \$34 million since the policy was put into effect in 1968. Covering operating deficits has required \$9.7 million, and using capital for special pro-

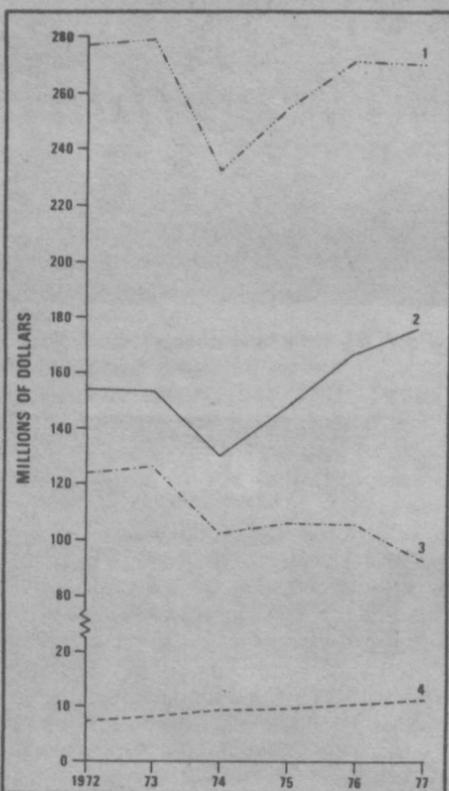
jects has been minimal until last year, when \$8.2 million was allocated.

Chart III, "Use of Capital Funds," looks at use of capital in more detail and from an annual perspective, as opposed to the cumulative approach. It is also divided into the three parts described in Chart II.

In the first part, the graph at the top "Capital Distribution in Excess of Income," the bars representing use of capital appear beginning in 1969, following creation of the Capital Fund and the total return program. Increasing amounts are paid out each year until 1973, when the amount of capital withdrawn begins to decline. This falling trend reflects both

Continued on Page 7

I. ENDOWMENT AND SIMILAR FUNDS

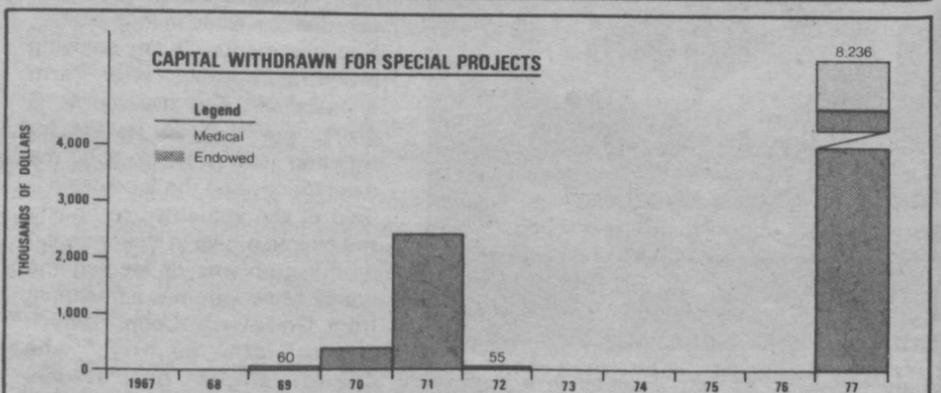
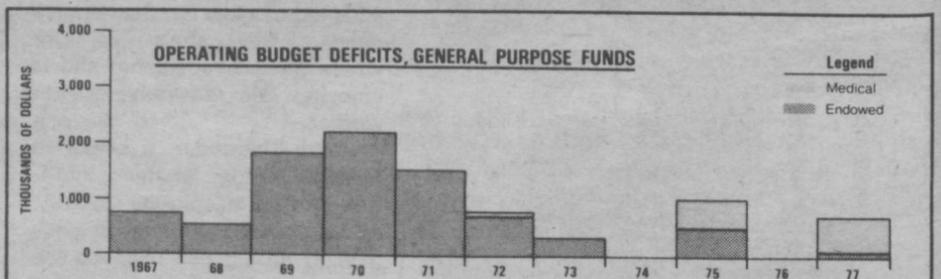
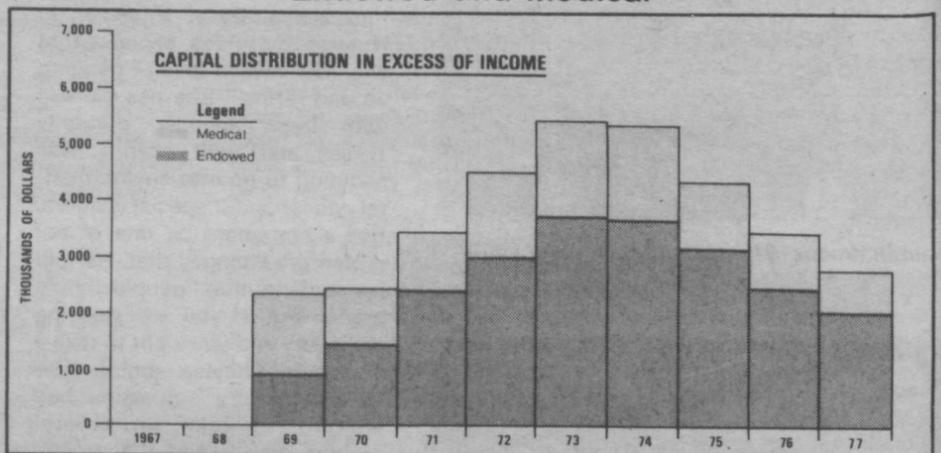


I. ENDOWMENT AND SIMILAR FUNDS (000's of \$)

Year	Total (1)	=	Endowment (Market) (2)	+	Funds Functioning As Endowment (Market) (3)	+	Living Trusts (Book) (4)
1972	277,800		153,700		124,100		7,775
1973	279,400		152,700		126,700		8,302
1974	232,900		130,000		102,900		9,539
1975	254,300		148,000		106,300		9,874
1976	272,000		167,000		105,000		10,186
1977	271,000		178,200		92,800		11,114

SOURCE: Cornell University Accounting Office.

III. USE OF CAPITAL FUNDS Endowed and Medical



SOURCE: Cornell University Budget, 1977-78, p. 75; University Accounting Dept.

Gifts Support Building Investments

Continued from Page 6

an improved stock market and the decision by the Board of Trustees to gradually reduce the "payout rate" — the amount of capital used annually for operations.

The graph in the middle, "Operating Budget Deficits, General Purpose Funds," shows that the endowed colleges at Ithaca have become better at meeting annual budget targets and reducing annual deficit spending, after several years of rather large deficits in the early 1970s. The medical college, on the other hand, has had deficits in two of the last three years, after a history of very small deficits, or break-even annual results.

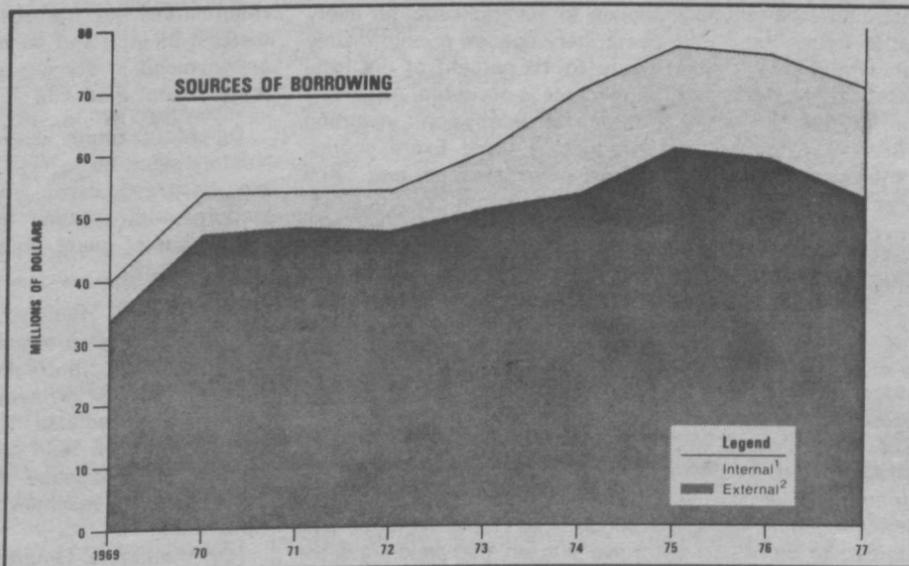
The graph at the bottom, "Capital Withdrawn for Special Projects," illustrates that except for 1971, use of capital for special projects has not been substantial until last year. In 1976-77, \$8.2 million was used at the Medical College and in Ithaca for three kinds of special projects: (a) critical maintenance; (b) central heating plant renovation and (c) writing off debts.

There are several points of view about the desirability of using substantial amounts of capital resources. Had Cornell not used \$55 million in the past 10 years, it would be a different institution today. These funds have helped the University to avoid cutting back programs and reducing the staff, and to arrest deterioration of campus facilities during a period of high inflation and a sluggish economy.

However, as a result of spending capital in such amounts, Cornell's operating budget is now under greater strain than it would have been had the University cut back its operations and relied only upon earnings from interest and dividends to finance its programs. There would now be more than \$1.5 million available each year for the operating budget from interest and dividends, had the capital not been spent.

The basic issue involved in use of capital is how to balance present needs with future needs. If Cornell continues to solve the problems of the present by using up a chief source of future income, it only postpones a day of reckoning. Every year Cornell spends more capital than it takes

IV. DEBT POSITION



SOURCE: Cornell University Financial Reports.

¹Borrowed from Endowment and Current Funds.

²Bonds, mortgages and notes payable.

in, in order to assist the operating budget for that year — for example lower tuition, raise salaries, fund new programs — it reduces the value of the endowment for future generations and confronts them with potentially severe problems.

The trustee decisions to reduce the annual rate of capital use, and to create a Reserve Fund of \$10 million whose principal cannot be used except in extreme conditions, are based on the judgment that future financial stability requires such measures. The trends in use of capital illustrated by these graphs provide the background for these trustee decisions.

Chart IV shows Cornell's debt. Since 1969, total debt has increased from \$40 million to \$70.4 million. Of this amount, \$13.7 million relates to the Medical School and \$56.7 million to the Endowed Colleges in Ithaca.

Cornell's external debt, the larger portion on the bottom, is largely with the State Dormitory Authority, and will be mostly paid off by the last decade of this

century. Over the nine-year period recorded, internal debt — the borrowing of one's own resources — has shown a marked increase from \$5.6 million to \$17.2 million dollars. Internal debt is shown by the smaller portion on the top.

Of the University's total debt (internal plus external) 79.9 per cent, (\$56.3 million) will be paid back by user fees as revenues from such sources as dormitory room rents, dining receipts, book store earnings, computer charges and utility billings. 10.5 per cent (\$7.4 million) is secured by gifts, trust funds or other promissory notes. Only 9.5 per cent (\$6.7 million) must be repaid from the annual operating budget. In 1976-77, these charges for "debt service" amounted to \$600,000.

The debt service burden upon the general purpose funds used for annual operations, then, is quite small. However, those revenue-producing units that carry the majority of Cornell's debt obligations must allocate a substantial portion of their annual revenues for debt service. For ex-

ample, 26 per cent of the total student housing budget this year is earmarked for debt service. If these funds were not required to pay off the debt, they could be used for other purposes — maintenance, renovation or reductions in rent.

Another significant aspect of Cornell's finances, not illustrated here by charts, is its investment in buildings. Since 1960, Cornell has spent more than \$174 million to build or renovate physical facilities. The vast majority of this amount has been from gifts earmarked for construction — in other words the work would not have been done without gifts, and most of the gifts would not have been received for other purposes.

In the past two years, new construction on the Ithaca campus has come to a virtual halt. Expenditures for alterations and renovations, however, continue to increase.

Facilities built without gifts amount to about \$30 million of the total \$173 million since 1960. These include two buildings at the medical college, Lasdon House and the "S" building, and the North Campus Dormitories on the Ithaca campus. The cost of these facilities was paid by bond issues, and are included in the totals shown in the debt graph.

While additions to physical facilities are carried on Cornell's accounting books as assets, their effect on the annual operating budget is that of a liability. Cornell assumes a continuing responsibility to heat, maintain and provide custodial services for its facilities. Moreover, campus facilities cannot be considered as liquid assets because it is unlikely that Cornell could sell them. It would be hard to raise cash for other purposes by selling campus facilities. It costs money to maintain them, and it would cost more to tear them down.

In highly simplified terms, these are some of the essentials of Cornell's capital position, its debt and its physical plant.

In a later issue we will examine income and expenditures. Readers with questions about Cornell's finances are invited to write the Chronicle. We will find answers for you and print those of general interest.

— Bryant Robey
— Ian R. Stewart

Job Help



For the most comprehensive look at summer job opportunities in a variety of fields and geographic areas, check the Career Center at 14 East Avenue. Ann Rogers will talk with you about your interests and will help you utilize their library.

The following are a few of the specialized programs which might interest you:

The Career Planning and Placement Office for Human Ecology at 185 Martha Van Rensselaer Hall has files on summer camps, camps for the handicapped, overseas jobs and other topics. Their files also include student evaluations of some of the summer programs.

Agriculture and Life Science students can receive supplemental summer placement information from the Career Planning and Placement Office at 16 Roberts Hall.

If you are interested in marine science, engineering or food services, Shoals Marine Laboratory in New Hampshire requires full maintenance, kitchen and engineering staffs and several teaching assistants each summer. Only a few positions are open this year. Call Rita Hogan at 256-3717 for more information.

Those pursuing public and health administration careers may discuss internship possibilities with Kay Gilcher, 311 Malott Hall. The Business and Public Administration Graduate School has an extensive summer placement program and may be able to assist you.

Most summer positions are filled early, so start your search soon to give yourself the best possible options.

For more information, stop by the ARC desk in Uris Library Lobby or call 256-4199. Let us help you get the most out of your summer.

'Merit' Aid

In last week's Chronicle we said we would find answers to questions about Cornell's finances. One matter about which there has been some confusion is merit-based financial aid.

Next year's budget will see no change in existing financial aid policies towards merit. The comments on this subject made in the administration's proposed budget policies paper follow:

"For 1978-79 no change is proposed in the present policies with respect to recognition of merit within need. During the coming six months a program of scholar recognition will be developed on a University-wide basis, for possible initiation in 1979-80. This program might entail the identification of a number of "Presidential Scholars," and include some recognition of merit in terms of scholarship assistance. More importantly, it would emphasize special academic benefits throughout the course of the student's undergraduate education. Special new funding will be sought in support of this program in order to avoid diverting existing funds from the needs-based program."



RSVP, CIVITAS May Work Together

By Mary McGinnis
CIVITAS Coordinator

Recently we received a call from the director of RSVP (Retired Senior Volunteer Program). She was searching for a young, energetic volunteer to coordinate the activities of a group of senior citizens who call themselves the Whiz Kids. The Whiz Kids meet every Tuesday afternoon from 1 to 3 p.m. to work on a simple group task (getting out a bulk mailing for a social agency, for example), to chat and enjoy each other's company. RSVP is one of several citizens' service programs (such as VISTA and the Peace Corps) which make up ACTION, the federal volunteer agency.

The phone call resulted in a longer face-to-face conversation in which we explored the possibility of CIVITAS and RSVP working together, college student and senior citizen side by side, helping fill community needs. Students, we agreed, are young, have energy, are open to new ideas and are often searching for learning experiences in the world off-campus. Senior citizens are older, possess less energy, but more patience, and have knowledge and skills they often welcome a chance to share with others. Perhaps together, as working partners, they could help children learn, tell them stories, supervise simple play activities or lead a musical group. They could visit shut-ins, assist the mentally retarded, or teach young mothers how to cook nutritious meals for their families.

We would like to know what you, our readers, think of this idea. Would you like the chance to volunteer with a senior citizen partner whose friendship and expertise you could share while you both helped someone else? What would you like to learn more about that an older person might be able to tell you? Is there a skill you wish you knew how to develop? Or a career area you've wondered about and don't know how to explore further? If you have any thoughts, give us a call (256-7513) and share them with us.

CURRENT CALLS FOR HELP

TEACH CROCHETING OR POTTERY: Help is needed in nursing facility downtown caring for residents with long-term illnesses. Thursday 3:15-4:15 p.m., crochet class; Wednesday 3-4 p.m., assistance with pottery program.

DOWNTOWN AFTER-SCHOOL BOWLING PROGRAM: Thursday 3-5 p.m., downtown recreational center would like to take children under 12 years of age bowling, but lacks enough adult helpers. You might even improve your own bowling score this way.

To respond, please call CIVITAS, 256-7513, Monday through Friday, from 10 a.m. to 2 p.m. or drop in Room 125, Anabel Taylor Hall.

NSF Announces CAUSE Proposal Deadline

The National Science Foundation's Comprehensive Assistance to Undergraduate Science Education (CAUSE) program will provide up to three years of support in response to detailed plans from science departments, groups of departments, or a consortia of institutions.

Only one proposal may be submitted by an institution, but each institution may also participate in one additional proposal as a member of a consortium. Maximum support would be \$250,000 for a 3-year project.

Proposals are due at NSF on Dec. 2, 1977. Copies of the proposal guidelines are available at the Office of Academic Funding, 123 Day Hall.

For further information contact Peter Curtiss at x6-5014.

Female Vet Students at All-Time High

A couple living in Ithaca raises fine Arabian horses. One day the husband travels to a horshow with one of the horses in a trailer. The car and trailer are involved in a serious accident. The man is taken to Tompkins County Hospital and the horse is taken to the New York State College of Veterinary Medicine at Cornell. The veterinarian on emergency duty rushes to the injured animal to begin treatment and then exclaims, "This is my horse!" Who is the veterinarian?

The above is an old riddle, the answer to which might have been difficult to surmise 10 to 20 years ago, but not today. The answer, of course, is that the veterinarian is the wife.

Just how often would one expect to encounter a woman veterinarian? Not very often. Women still represent only 10 percent of the veterinary profession, but the situation is rapidly changing.

At the College of Veterinary Medicine at Cornell, for example, women make up 52 percent of the Class of 1981—up from only three percent of the Class of 1971.

More women graduated from colleges of veterinary medicine nationally between 1972 and 1976 than had graduated in the previous 70 years. By the turn of the century, one-third of all veterinarians will be women—a rapid integration of what was once a masculine profession.

Why were women not admitted to veterinary colleges in previous decades? Arguments

were raised that women were not physically strong enough to handle and restrain large animals such as cattle and horses and that women would take men's places in veterinary colleges, but would upon graduation marry, have children, not practice veterinary medicine and waste the taxpayers' money that educated them.

Using these arguments as the basis of their decisions, most veterinary medical colleges, including Cornell, admitted either two female students or no female students each year. It was considered cruel to admit one woman; if there were two admitted they could be one another's friend and lab partner in anatomy—no male student would be forced to work with a female student.

Pharmacological research in recent years has resulted in a variety of tranquilizers and anesthetic agents that enable veterinarians to restrain animals chemically rather than by physical force, and the cultural trend toward later marriages, smaller families and continuous employment of women has removed many of the barriers for women interested in practicing veterinary medicine. At the same time, legal pressure has been building to eliminate all types of discrimination in academic admission policies.

The increased opportunities for women in veterinary medicine, however, do not mean that it is easy for women—or men—to gain admission to

veterinary colleges. At Cornell and elsewhere, there are now seven to 10 applicants for every veterinary college opening. Only eight to 10 percent of the total applicants is accepted. And standards for admission, including Graduate Record Exam scores, grade point average and large and small animal practice experience, have not been lowered by the influx of women.

Will women veterinarians enter large animal practices to fill the need for more specialists trained to meet the health needs of food-producing animals? Currently only one percent of female veterinarians are engaged exclusively in large animal practice, but only three percent of male veterinarians have chosen that field. And the trend may change because more women are trying to enter large animal practice or study large animal diseases.

At Cornell, for example, there are currently three women veterinarians on the veterinary medical faculty, and all of them are involved in some aspect of large animal medicine.

Dr. Mary Smith is an ambulatory clinician whose duties are to treat farm animals, predominantly cattle, but including sheep, goats, horses and swine.

Dr. Dorothy Holmes, an immunologist, is studying the mechanism in animals, particularly horses, whereby antibodies are produced. This kind of research can lead to better diagnoses of disease and the production of vaccines to prevent them.

Dr. Katherine Houpt studies the behavior and physiology of appetite of an important food animal, the pig. Knowledge of regulation of appetite in pigs will

enable pork producers to produce meat more economically.

The Cornell record for women specializing in large animal medicine is somewhat better than the national average, but it suggests that women can work effectively in the large animal field and that role models for women interested in that field are beginning to become available.

Editor's Note: The above article was excerpted from a piece on national trends in veterinary medical education by Dr. Katherine Houpt, assistant professor of physiology at the New York State College of Veterinary Medicine at Cornell. The longer article was published earlier this year in the Cornell Veterinarian.

Catholic Chaplains Named

The Rev. James P. Connolly and the Rev. John F. Robbins are the new Roman Catholic chaplains at Cornell University.

Connolly entered the Jesuits in 1960. After studying and teaching in various parts of New York, he was ordained in 1972. For the next four years, he worked on the retreat team at Mt. Manresa Retreat House on Staten Island.

He spent the last academic

year updating theology and spirituality at the Jesuit School of Theology in Berkeley, Calif.

Since 1968, Connolly has been actively involved and has held various leadership positions with Charismatic Renewal, an international and interdenominational movement that originated in the United States. The movement is a revival of religious spirit and enthusiasm that has similarities to the experience of the Pentecostal Fellowships.

Connolly was appointed as chaplain at Cornell in September.

Robbins, a member of the Congregation of St. Basil, a small community of educators primarily in Canada, did his graduate work in English at Wayne State University and in theology at the Toronto School of Theology.

He was appointed to Cornell as chaplain to the Catholic community by the Bishop of the Diocese of Rochester, and then as a University chaplain by Cornell in June.

Robbins' theological training included substantial work in psy-

chology, particularly sexuality. This has led to work with sexual minorities, such as homosexuals, as chaplain to Dignity Chapters in both Houston and Rochester.

Inauguration

Continued from Page 1

itors. The Rhodeses will be at the Herbert F. Johnson Museum of Art from 3:30 to 4 p.m., at Olin Library from 4:15 to 4:45 p.m. and at Mann Library from 5 to 5:30 p.m.

The cost of the inauguration has been budgeted at \$25,000, mainly for expenses of setting up Barton Hall. The figure of \$300,000 mentioned in the "spoo" issue of the Cornell Daily Sun is inaccurate.

The Cornell Information and Referral Center will be open to answer questions about inaugural events until midnight on both Wednesday, Nov. 9, and Thursday, Nov. 10. The telephone number of the center is 256-6200.

Impact Statements Workshop

'News Isn't All Bad'

Faced with the Red Sea standing between his people and the Promised Land, Moses prayed for a miracle. The Lord answered, the modern parable has it, with some good news and some bad. The good was that the Lord would part the waters and allow the Israelites to pass. The bad was that first Moses would have to prepare an environmental impact statement.

But environmental impact statements are not the bureaucratic nightmares that many people think, according to Eugene Duvernoy and Wayne Marks of the Center for Environmental Re-

search (CER) at Cornell University.

Speaking to the annual Conference of Directors of Environmental Health Services here recently, Duvernoy and Marks showed how impact statements on the state and federal level have facilitated communication among government agencies, uncovered latent opposition to projects by bringing the public into the planning process at an early stage and made for better decisions on whether or not to build projects ranging from roads to sewage treatment plants to municipal swimming pools.

As they led the health directors step-by-step through the

procedures for implementing New York's new State Environmental Quality Review Act (SEQR) they pointed out that the average impact statement on the state or local level would be a brief document. Massive reports, such as that prepared for the Alaska pipeline, would not be required by SEQR, and even federal impact statements, known for their bulk, were in the process of being greatly simplified, they said.

They stressed that environmental impact statements are just one component of a larger planning process. The planning process, they pointed out, must also consider whether a proposed project is financially responsible, must weigh its social costs and benefits and must evaluate other aspects of project design before a project is built.

The record indicates, they added, that the impact statement process does not substantially delay construction because all the other studies needed for the project can be conducted simultaneously with the impact statement preparation.

The workshop on environmental impact statements was part of a larger CER program for helping communities prepare, review and evaluate environmental impact statements and implement SEQR.

The Project on Environmental Impact Statements is directed by Neil Orloff, associate professor and member of Cornell's Program on Science, Technology and Society and the Department of Environmental Engineering. It is funded by the Rockefeller Foundation.

employer," said Blandford-Wilson. "I have concern for the hiring departments and for those seeking transfers or positions within the University and hope to provide a service amicable to both."

Blandford-Wilson has been with Cornell since 1961, and for the past six years has worked in various professional capacities in staffing and compensation in University Personnel Services, most recently as a compensation specialist.

She is an employee-elected member of the University Board of Trustees and is president of the Board of Directors of the Cornell Federal Credit Union.

Staffing Services Manager Appointed

Ardella Blandford-Wilson has been named manager of staffing services in Cornell University Personnel Services, Robert V. Sweetall, associate director of personnel, has announced. She succeeds Claire M. Nagel, whose appointment as manager of employee benefits was announced earlier.

Blandford-Wilson is responsible for the scope and quality of the recruitment efforts for non-exempt positions and for providing advice and assistance to hiring departments in filling exempt-level, non-academic positions.

"Staffing is a critical area in any organization, and particularly in an area where it is the primary

Affirmative Action Planning Is Focus

Affirmative action planning was the subject of a recent three-day meeting at the New York State School of Industrial and Labor Relations (ILR) at Cornell University.

Representatives from the federal government, the corporate sector and education focused on setting affirmative action planning goals in a meaningful, consistent and useful way.

"It is unusual for the three sectors represented at the conference to come together in a problem-solving, rather than an adversary, setting," according to Robert S. Smith, associate professor in the ILR School and one of the local organizers of the conference.

"We feel we started a dialogue and shared information which can be of use in beginning to rationalize affirmative action planning," Smith said.

Papers at the conference concentrated on three major topics: —the problems in defining the populations of available minorities and women against which

corporate performance is to be measured;

—the problems of defining available job pools of workers within the firm by "job clusters;"

—the use of computer-based models to simulate the flows of minorities and women through complex organizations over long periods of time.

Case studies were prepared by Lee Dyer, an assistant professor in ILR, and Elizabeth Wesman, an ILR graduate student, for use in workshop discussions in all three areas.

The conference was conceived by Robert B. McKersie, dean of the school. Sessions were chaired by Ronald G. Ehrenberg, professor and chairman of the department of labor economics; Felician F. Foltman, a professor in ILR, and Thomas A. DeCotis, an associate professor. Arthur B. Smith, a former ILR faculty member, also chaired a session.

The conference was co-sponsored by the ILR School and the Office of Federal Contract Compliance Programs, U.S. Department of Labor.

Thursday, November 10, 1977

Armband-wearing Students To Show Concern for Aid

The Financial Aid Project, a student organization formed "To ensure that Cornell's financial aid policy and practice is directed toward guaranteeing every qualified student, regardless of financial status, the opportunity for a Cornell education," has submitted the following statement on the budget.

The Provost's budget announcement last week included some significant recommendations in the area of tuition and financial aid policy. First, the administration recommended a tuition hike of 9-10% in the endowed schools and 6-7% in the statutory schools. This reflects a policy of determining tuition based on "indices of economic change and the University's needs for operating funds during the academic year," as opposed to solely on "the rate of increase in consumer prices and disposable per capita income," as in previous years. Second, financial aid would increase "at no more than the rate of increase in tuition in 1978-79. Such a limitation would mean in effect that the estimated needs of students would be viewed somewhat less generously than in the recent past." In the past, financial aid has risen enough to completely compensate for increased student costs, at least on paper. Third, "during the coming six months a program of scholar recognition will be developed on a University-wide basis for possible initiation in 1979-80. This program might entail the identification of a number of 'Presidential Scholars,' and include some recognition of merit in terms of scholarship assistance." These changes would negatively affect the University and have a disastrous impact on many needy students.

Tuition in the endowed schools has risen steadily from \$2200 in 1968-69 to more than \$4800 next year. Statutory tuition has risen from \$675 to about \$2100. Over the same period Per Capita Disposable Income has grown at a similar rate, while the Consumer Price Index has increased much more slowly. Basing tuition increases on the rate of PCDI has driven students from low and lower-middle income families away from the University. Why? First, PCDI represents an average of wage increases along the whole income scale. Yet, pay raises have been concentrated in the upper-middle and upper income ranges. The incomes of lower income families have not, on the average, come close to doubling in the last ten years. Second, many of these families live in urban areas where inflation is unusually high. Their pay raises are eaten up by the costs of other goods and services before they can be applied to education.

The statistics bear out this conclusion. In 1975 only 10 per cent of American families could afford to send one child through a Cornell endowed school without financial aid, according to the College Scholarship Service. Only one in five could afford a statutory school. Fewer families can afford Cornell now than at any time in the past ten years.

The Provost's announcement says, "The fact that the University continues to attract superior students from all segments of the population suggests that tuition increases have, in fact, been reasonable given the inflationary

economy." As a Cornell student I can testify that they have been anything but "reasonable." The number of students I've met, who have had to take a semester or year off, or drop out altogether, due to insufficient funds, is considerable. Others have taken out huge loans or worked two jobs. While the University recommends that students borrow no more than \$750, the average Cornell student loan is almost \$1200. A recent study by the Admissions Office showed that for a large proportion of the students who are accepted by Cornell and do not come, cost is a major deterrent.

Rising tuition has partially undermined the diversity of the University student body. In 1975 30 per cent fewer applicants in the 0-\$15,000 income bracket were admitted than in 1972. This trend has continued through 1977. Cornell University admitted less than two-thirds as many students from the lower income brackets as the national university average. By contrast, it admitted twice as many from the highest income brackets. There are only about 600 low income students in all of Cornell and more than half of these are in COSEP.

A number of suggestions have been made, by Chairman Purcell, President Rhodes and others, that increases in next year's financial aid budget might not be enough to compensate for rising costs. They argue that financial aid has risen more quickly than the rest of the budget and is draining needed resources out of other areas. Financial aid now consumes 14.5 per cent of general purpose revenues in the endowed schools; 45 per cent of the students receive aid. On the other hand, from 1951 to 1978 tuition revenues rose from 46.5 per cent to 65 per cent of all general purpose funds. Increased financial aid has occurred in response to rising tuition, not the other way around.

The financial aid budget should not be cut, nor should its growth be slowed. Low and middle income students will be strapped by the tuition increases. Even in the worst of times, in the aftermath of the Arab oil embargo, for example, the administration recognized the importance of financial aid to the University's mission, and maintained it at adequate levels. A Carnegie Commission report in 1972 considered the financial plight of universities in the seventies and warned, "We consider it unwise, however tempting in the short-run, to cut such items as: necessary maintenance; library expenditures for new books and journals; student aid." Cornell disregarded the Commission's advice on maintenance. Will it make the same mistake with financial aid?

Where can the money come from to meet the priorities outlined in the budget report, and to support financial aid? The value of the University endowment is now close to \$340 million. Yet the budget report recommends a reduction in capital use for operating expenses: a lower capital fund payout rate; less use of restricted bequests. In the last two years the value of the endowment has rebounded strongly from the recession. Presently, Cornell has \$34,000 endowment per endowed college stu-

dent, and \$20,000 per student. The Twentieth Century Fund Task Force on College and University Endowment Policy (*Funds for the Future*, McGraw-Hill, 1975) found that the average endowment assets per full-time student at other universities "ranged from \$1130 for the largest institutions to \$2360 for the small institutions." The same group recommends that, to balance present and future needs and "to keep pace with the rate of inflation peculiar to higher education, the spending rate of endowment should probably be between 3 and 4 per cent, although it might increase if gifts could be counted on for growth." Cornell is spending only 2.7-2.8 per cent of the value of its endowment this year. Next year, the Provost's plan outlines further reductions.

The budget report claims that "Virtually all of the remainder of the University's spendable capital for Ithaca, about \$50 million, is now either held for designated uses or spendable only after certain conditions can be met." However, New York State Not-for-Profit Corporation Law provides that income from an endowment fund may include a prudent portion of realized appreciation of principal, provided that the market value of the remaining principle is no less than the value of the assets when they were originally given to the institution. Thus, Cornell could legally divert to current funds a portion of the appreciation of both restricted quasi-endowment and true endowment. So long as this diversion increased capital spending to no more than 3-4% of the value of the endowment, there would be no harmful impact on the University's long-range fiscal status.

We do not face a choice between higher tuition and lower financial aid on the one hand and inadequate salaries on the other. In a budget of \$300 million such direct tradeoffs are logical absurdities. The Financial Aid Project feels that Cornell has sufficient resources to meet the needs of both students and faculty. We demand that financial aid increase enough to cover rising student needs. We demand that no money be diverted from needy students to finance a merit-based aid program (the subject of a future letter). We will be wearing green armbands and carrying placards to the Inauguration to dramatize our concern. We would have an institution where any students, regardless of income, can find instruction in any study.

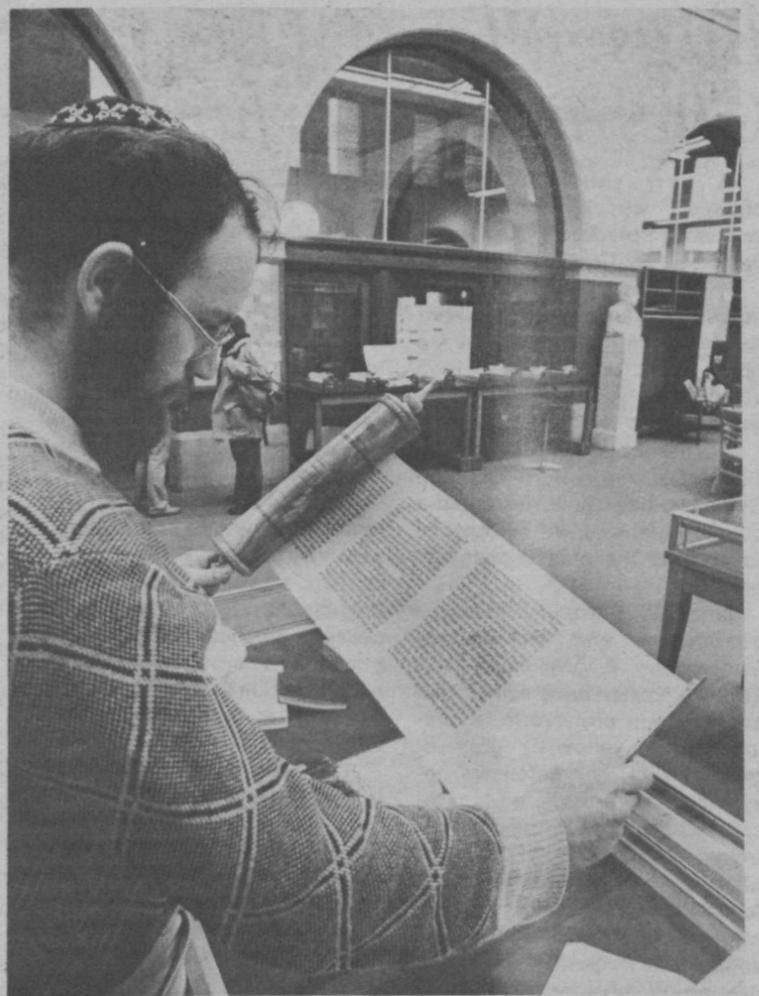
Business Managers Appointed

Staz

Sharon Staz has been appointed business manager for the Department of Maintenance and Service Operations in the Division of Facilities and Business Operations at Cornell University.

In addition to the business and financial management of the unit, Staz is responsible for personnel and customer relations and the development and monitoring of the department's computer systems.

She has been employed by the Department of University Unions at Cornell since 1969, and most recently served as director of Noyes Center. She is a member



Jack Gilberg of the Cornell Hillel Foundation unrolls a handwritten scroll of the Book of Esther. The scroll is part of a Jewish Book Exhibit now on display in Uris Library.

Exhibit Features Old Jewish Books

An original set of 19th century Jewish holiday prayer books printed in Roedelheim, Germany, a 12th century edition of the Talmud and a set of signed limited editions of illustrated texts by Ben Shahn are among the examples of literature in a Jewish Book Exhibit on display now through the end of November in Uris Library at Cornell University.

The exhibit, organized by the Cornell Hillel Foundation, coincides with national Jewish Book Month which runs from Nov. 4 to Dec. 4.

The display spans some 3,000 years of Jewish literary culture. Four categories of literature are represented: traditional/classical Jewish texts, Jewish prayerbooks, children's books and calligraphy and text illustration.

Some of the examples of the traditional texts are ancient and modern editions of the Talmud, which contain the oral traditions of the Torah, the ever-expanding body of Jewish law, commentary and traditional lore. Medieval and modern commentaries on the Bible, a handwritten scroll of the Book of Esther and a 1903 edition of the Hagaddah, which

is part of the Jewish oral traditions, are also included.

Among the illustrated texts is a facsimile of an illuminated manuscript of the Mishnah Torah dating from 1472. The limited editions of modern Jewish artists, such as Shahn's "The Alphabet of Creation" and Saul Raskin's illustrations of "Pirke Avot" are also included. The Jewish culture has been predominantly a literary culture, and the examples of calligraphy and illustrated texts reflect this orientation of even the visual arts towards the written text.

The Jewish prayerbooks, the most widespread and popular form of literature among Jewish people, have been translated into many languages, including Polish, Hungarian and Yiddish. Several translations are included in the display.

The development of children's books is a relatively recent one within the Jewish literary trend. A Hebrew version of "The Wise Men of Helm" by Ben Aron is on display. The "wise" men of Helm—notorious for their lack of common sense—have been the subject of aphorisms and part of the Jewish oral tradition.

of the Campus Planning Committee, the Alcohol and Drug Education Committee and recently has been appointed to the University Committee on the Handicapped.

Statz holds the B.S. degree from Ithaca College. Before joining the Cornell staff she was employed by Ithaca College as business manager and assistant director of the Egbert Union.

Statz

David Statz has been appointed business manager for the Department of Utilities in the University's Division of Facilities and Business Operations. Statz will be responsible for the budgetary business and financial management of the department.

He will be providing business support services to the various utility plants and will be involved in the energy conservation efforts of the University.

Statz holds the B.S. in business administration and did graduate work in business at Arizona State University and the State University of New York at Albany.

From 1973 until his return to graduate school in 1976, he was assistant administrator of the Elmira Psychiatric Center, where he was responsible for the management of all non-medical business and support services. Prior to that, he served as business manager for the South Lansing Center for Children.

Bugs, Plants Use Chemical Warfare

A new skirmish in the chemical war between plants and their predators has been described by Cornell scientists.

It has been known for many years that plants possess powerful defensive chemicals that are either toxic or distasteful to a variety of animals, including man.

Researchers at the State College of Agriculture and Life Sciences, have now described a counterdefense used by insects, to combat the plant's chemical arsenal.

Lena B. Brattsten, research associate, and Professors Christopher F. Wilkinson and Thomas Eisner have found that the southern armyworm, a one-inch long, yellowish grey or green insect, has defensive enzymes that are triggered into increased activity following the armyworm's eating of noxious plants. This enzyme system, found in the gut of the armyworm, acts as a biochemical sewer and degrades potentially dangerous substances.

The details of this research were published in the June 17 edition of the journal "Science."

The Cornell researchers said that an explanation of how this complex enzyme system works is important because man also has a similar system that

degrades noxious substances. Indeed, man and insects often share an appetite for the same food plants, and both require systems to handle noxious substances from plants.

In addition to degrading noxious chemicals in plants, this system is important also because it is responsible for degrading drugs, pesticides and other synthetic chemicals.

Eventually, the Cornell researchers would like to define the range of this enzyme system's ability to protect animals. Another goal is to probe possible biochemical differences between the systems of different species. This information is needed to design insecticides with selective toxicity.

This research was supported, in part, by the College, and grants from the National Science Foundation and the National Institutes of Health.



Human Ecology

Members of the faculty and administration of the State College of Agriculture and Life Sciences and the State College of Human Ecology at Cornell University, have been given awards for outstanding service by the state chapter of Cooperative Extension's honorary fraternity.

Lucinda A. Noble, associate dean of the College of Human Ecology and associate director of the state's Cooperative Extension, was honored for her leadership in promoting extension's role in adult and continuing education.

C. Arthur Bratton, professor of farm management in the Department of Agricultural Economics, received an award for his development and implementation of an educational program on estate and retirement planning for farm and rural families.

The honorary fraternity honored Charles Ostrander, professor in the Department of Poultry Science, for his research and extension programs in poultry production management and waste management.

A team award was presented to five members of the faculty of the College of Human Ecology for their preparation and evaluation of the resident information program, an educational program for economically and

socially deprived families in housing developments. The individuals honored were Regina Rector, Ruth N. Klippstein, Elizabeth Wiegand, Helen Y. Nelson and Bettie Lee Yerka.

Cushman

Harold R. Cushman, professor in the Department of Education at the State College of Agriculture and Life Sciences, has received the Outstanding Service Award of the American Association of Teacher Educators in Agriculture.

He was recognized for his "meritorious contribution to the agricultural education profession." Cushman is well known in his field for his teaching and research in adult education and occupational experience programs.

Astronomy

Two Cornell University astronomers, James L. Elliot and Carl Sagan, received awards

from the National Aeronautics and Space Administration (NASA) in ceremonies in Washington, D.C. last week.

Elliot, assistant professor of astronomy at Cornell, received the NASA Medal for Exceptional Scientific Achievement. The medal was given "in recognition of his outstanding contributions to space science, particularly in the field of planetary astronomy. His innovative use of the Kuiper Airborne Observatory for occultation work advanced the study of planetary atmospheres and resulted in the discovery of a major new planetary feature: the rings of Uranus."

Sagan, the David Duncan Professor of Astronomy and Space Sciences at Cornell, received NASA's Distinguished Public Service Medal. The award was presented "for his outstanding contributions to NASA's scientific achievements and the distinguished service he has rendered the Nation in communicating to the public the value and significance of space science."

Offset Copiers 'Cheaper'

Here is one of the many repeat suggestions for saving money that have crossed the desk of the University's War on Waste Committee.

To make 10 or more copies of a single page, the offset process available in University copycenters is cheaper than using a conventional copier, i.e. Xerox.

If you have other suggestions, please submit them to Jack W. Lowe, B-7 Day Hall. If yours is a good one, it might win a cash prize.

Academic Funding Announces New Awards

The Office of Academic Funding announced the following new grants and contracts for sponsored programs for the Ithaca and Geneva units of the University. This list does not include renewals or continuations.

A.C. Albrecht, Chemistry, Near Ultraviolet Raman Studies of Cytochrome P450, NIH, 12 months, \$60,945.

M. Alexander, Center for Environmental Research, Effect of Acid Precipitation on Micro-Organisms and Biochemical Activities of the Soil, EPRI, 24 months, \$118,816.

D.G. Ast, Material Science and Engineering, Mechanical Properties of Metallic Glasses, Navy, 12 months, \$14,957.

R.E. Austic, Poultry Science, Interaction of NA and K in Hyperuricemia and Gout, NIH, 12 months, \$36,885.

R.A. Baer, Natural Resources, Values and Valuing in Professional Education for Careers in Agriculture and Life Sciences, Lilly Endowment, 12 months, \$40,000.

R.C. Baker, Poultry Science, Development of New Products from Spent Fowl, American Egg Board, 12 months, \$6,600.

J.M. Ballantyne, Electrical Engineering, National Research and Resource Facility for Submicron Structures, NSF, 12 months, \$2,000,000.

B.W. Batterman, Applied Engineering Physics, Tissue Culture Facility Development, NIH, 12 months, \$5,000.

A.L. Berkey, Education, Planning, Operation, Maintenance and Repair of Dairy Equipment Systems, NYS, 2 months, \$3,060.

A.L. Berkey, Education, Constructing Landscape Features: Inservice Program for Teachers/Agr., NYS, 2 months, \$2,940.

J.M. Bird, Geological Sciences, Stress History of Faults from Microstructure Analysis, NSF, 12 months, \$32,429.

J.J. Bisogni, Engineering, Engineering Equipment Grant for Double Beam UV-Visible Spectrophotometer, NSF, 12 months, \$6,000.

V.T. Bjarnar, Libraries, Fiske Icelandic Collection Cataloguing, NEH, 36 months, \$160,000.

A.L. Bloom, Geological Sciences, Quaternary Tectonics and Sea-Level Fluctuations-SW Pacific, NSF, 12 months, \$45,025.

R.L. Bowers, Program on Science, Technology and Society, General Support for Program of STS, Fleischmann Foundation, 12 months, \$29,051.

P.J. Bruns, Biological Sciences, Developmental Genetic Studies of Conjugation in Tetrahymena, NSF, 12 months, \$60,000.

R.A. Buhrman, Applied Engineering Physics, Limited Dimensionality and Surface Effects in Metallic Systems, NSF, 12 months, \$36,711.

A.P. Casarett, Graduate School, Fulbright-Hays Doctoral Dissertation

Research Abroad 1977-78, Office of Education, 5 months, \$37,132.

P.P. Cheng, Libraries, China Catalog of the Wason Collection, NEH, 15 months, \$34,396.

G.F. Combs Jr., Poultry Science, Biochemical Investigation of Feed Mold Influences on the Nutrition of Poultry, Herman Frasch Foundation, 60 months, \$50,000.

R.W. Conway, Computer Sciences, Diagnostic Facilities in a PL/I Dialect, NSF, 24 months, \$190,361.

J.E. Dennis, Computer Sciences, Software for Nonlinear Optimization, National Bureau of Economic Research, 12 months, \$27,803.

W.L. Dills, Nutrition, Fructose Analogs as Metabolic Inhibitors, NIH, 12 months, \$57,223.

R.G. Ehrenberg, Industrial and Labor Relations, Econometric Analysis of the Costs of Public Sector Pension Reform Legislation, NSF, 12 months, \$96,678.

C.J. Farris, Human Ecology, Developing Group Interaction Techniques: Toward Exemplary Inservice for Multi-Occupational Teachers, NYS, 12 months, \$15,522.

C.H. Finch, Libraries, New York Historical Resource Center, NEH, 12 months, \$17,000.

M.E. Fisher, Chemistry, Approximants for Singular Functions of Two or More Variables and Their Application, NSF, 12 months, \$28,700.

M.E. Fisher, Chemistry, Chemistry Research Instrument Proposal, NSF, 12 months, \$60,000.

J.G. Franclemont, Entomology, Systematics of Oletreutinae, NSF, 18 months, \$1,385.

J.H. Freed, Chemistry, Postdoc Fellowship for Dr. Eva Meirovich, Weizmann Institute, 12 months, \$11,500.

B. Ganem, Chemistry, Synthesis of Macrocyclic Lactams, American Chemical Society, 24 months, \$24,000.

J.L. Gerner, Human Ecology, Doc Dis-Attraction of Affluent Households to Inner City Neighborhood, Housing and Urban Development Agency, 12 months, \$9,861.

A.D. Geske, Music, Undergraduate Education in the International Performing Arts, Office of Education, 12 months, \$40,000.

T. Gold, Center for Radiophysics and Space Research and Astronomy, Analysis of Erosion and Transportation Features - Apollo Photography, NASA, 12 months, \$23,000.

M.J. Goldstein, Chemistry, Structure and Mechanism in Cyclobutane Pyrolysis, NSF, 12 months, \$13,299.

V.E. Gracen Jr., Plant Pathology, Protoplast Fusion and Mitochondrial Transfers in Maize, NSF, 12 months, \$35,000.

K.E. Gubbins, Chemical Engineering, Properties of Polyatomic Liquids and Their Mixtures from Computer Simulation

and Theory, NSF, 24 months, \$127,376.

K.E. Gubbins, Chemical Engineering, A Minicomputer for Research in Chemical Engineering, NSF, 12 months, \$45,000.

H.H. Hagedorn, Entomology, Characterization of Mosquito Brain Hormone, NIH, 12 months, \$49,729.

B.P. Halpern, Psychology, Effect of Taste, Texture, and Hunger on Human Liquid Ingestion Patterns, NSF, 12 months, \$44,367.

S.F. Hamilton, Human Development and Family Studies, Youth Conservation Corps Evaluation, Interior, 3 months, \$2,450.

G.G. Hammes, Chemistry, Multienzyme Complexes, NSF, 12 months, \$35,000.

B.M. John, Rural Sociology, Combined Migrant Nutrition Education Project, NYS, 12 months, \$46,061.

B.M. John, Rural Sociology, Opening the Outdoors 1977-78, NYS, 12 months, \$41,966.

R.W. Kay, Geological Sciences, Regional Petrology and Structure of the Lower Crust: A Study of Kinoliths and Deep Crustal Reflection Profiles, NSF, 12 months, \$15,000.

R.W. Kay, Geological Sciences, Aleutian Arc Magmatism in Space and Time: A Geochemical and Petrologic Study, NSF, 24 months, \$165,015.

T.A. Kochan, ILR, Dissemination of the Findings of the Impasse Procedures Study, NSF, 12 months, \$16,230.

D. Kohlstedt, Material Sciences, Inelastic Deformation in Non-Metallic Crystalline Solids, ERDA, 12 months, \$45,000.

R.E. Kraut, Psychology, Verbal and Nonverbal Cues in Detecting Deception, NIH, 12 months, \$37,542.

B.R. Kusse, Plasma Studies, Beam Plasma Interactions in Totoidal Geometry, NSF, 12 months, \$45,000.

D.A. Lancaster, Ornithology, Museum Aid, NYS, 12 months, \$3,052.

T.W. Leavitt, Johnson Art Museum, Aid to Special Exhibitions, NEA, 12 months, \$45,000.

T.W. Leavitt, Johnson Art Museum, 3 Prop. for Funding-Museum Education, E. Dickinson Exhibit, NYS Artists, NYS, 12 months, \$18,000.

D.M. Lee, LASSP, Equipment for Ultra Low Temperature Studies, NSF, 18 months, \$70,300.

J.A. Liggett, Civil and Environmental Engineering, Boundary Integral Solutions to Groundwater Problems, NSF, 12 months, \$52,801.

P.L. Liu, Civil and Environmental Engineering, Sea Grant Program-Evaluation of Effects of Floating Tire Breakwaters in Barcelona Harbor, NYS-SUNY, 4 months, \$1,315.

H. Mahr, LASSP, X-Ray Holography, Navy, 24 months, \$6,200.

S.T. Marston, Ecology, The Impact of the Unemployment Insurance Program on Temporary Lay-offs, Labor, 12

months, \$12,630.

W.J. McLean, Mechanical and Aerospace Engineering, Hydrogen Cyanide Reactions in Combustion Systems, ERDA, 12 months, \$35,000.

O.A. McBryan, Mathematics, Critical Behavior of Rotation-Invariant Ferromagnets, NSF, 36 months, \$23,822.

J. Meinwald, Chemistry, Synthesis of Pederin, A Potent Inhibitor of Protein Synthesis, American Cancer, 12 months, \$45,094.

R.P. Merrill, Chemical Engineering, Structure and Chemistry of Surfaces, AF, 14 months, \$74,764.

R.P. Merrill, Chemical Engineering, A Fundamental Study of the Structure, Chemistry and Catalytic Properties of Ruthenium Surfaces, NSF, 12 months, \$88,267.

J.G. Miller, Libraries, College Library Resources Program, Office of Education, 12 months, \$3,855.

R.R. Minor, Pathology, Factors in Lung Development, NIH, 12 months, \$109,947.

F.C. Moon, Theoretical and Applied Mechanics, Infrared Techniques in Magnetic Levitation and Propulsion Guideway Design, Department of Transportation, 12 months, \$65,000.

G.H. Morrison, Chemistry, Ion Microscopy in Biology and Medicine, NIH, 12 months, \$56,221.

G.H. Morrison, Chemistry, Quantitative Ion Probe Microanalysis, NSF, 12 months, \$98,953.

A.H. Nilson, Structural Engineering, Fellowship for N. Martine-Cracked Widens in Partially Prestressed Concrete Beams, Prestressed Concrete Institute, 6 months, \$3,250.

J.E. Oliver, Geological Sciences, Fine Structure of Crust and Upper Mantle from Analysis of Seismic Reflection Records, NSF, 12 months, \$60,018.

Y.H. Pao, Theoretical and Applied Mechanics, Tension-Compression-Mechanical Testing System, NSF, 12 months, \$50,485.

S.M. Parrish, English, The Cornell Wordsworth: A new Edition of Wordsworth Poetical Works, NEH, 24 months, \$35,906.

N. Press, Johnson Art Museum, Exhibition of Craft Landscapes, NEA, 12 months, \$8,000.

D.R. Price, Agricultural Engineering, Intergovernmental Personnel Act Agreement, ERDA, 12 months, \$34,636.

E. Racker, Biochemistry, Control of Glycolysis in Cancer Cells by Bioflavonoid, American Cancer Institute, 12 months, \$37,688.

R. Raj, Material Science, High Temperature Mechanical Behavior of Silicon Nitride Under Transient Loading, ERDA, 12 months, \$36,000.

R.F. Risley, Industrial and Labor Relations, Handbook of Personnel Rules, Regulations and Policies, Tioga County, 3 months, \$350.

W.F. Rochow, Plant Pathology, Specificity Between Plant Viruses and Aphid Vectors, NSF, 12 months, \$32,000.

R.M. Ross, Libraries, Conversion of U.S. Document Serials for CONSER Project, Library of Congress, 12 months, \$17,605.

R.M. Ross, Libraries, CONSER Service Agreement, N.Y. Public Library, 3 months, \$11,614.

E.T. Schmidtman, Entomology, Field Evaluation Studies with Permethrin, ICI-US, 12 months, \$2,800.

W.F. Shipe Jr., Food Science, Development of a Rapid Method for Detecting Rancid Flavor in Milk, Dairy Res. Inc., 12 months, \$15,815.

A.J. Sievers III, LASSP, Optical Properties of Metallic Surfaces Small Particles and Composite Coating for Solar Energy Conversion Applications, ERDA, 12 months, \$160,000.

R.H. Silsbee, LASSP, Electron Spin Resonance, NSF, 12 months, \$45,233.

J.M. Stycos, International Population Program, Social and Psychological Factors in the Decline of Costa Rican Fertility, AID, 24 months, \$119,842.

R.N. Sudan, Plasma Studies, Generation and Focusing of Pulsed Intense Ion Beams, ERDA, 12 months, \$100,000.

J.S. Thorp, Electrical Engineering, Power System Transient Control Strategies and Effects, NSF, 12 months, \$44,000.

D.L. Turcotte, Geological Sciences, Numerical Studies of Mantle Convection, NSF, 12 months, \$26,435.

D.H. Wallace, Plant Breeding, Physiological Genetics of Recognition and Self-Incompatibility - No. 2, NSF, 24 months, \$60,001.

K.K. Wang, Mechanical and Aerospace Engineering, Supplemental Funding for Injection Molding Project, Ford Motor Co., \$4,850.

S.M. Watkins, Human Ecology, Design of Women's Holsters, Drug Enforcement Administration, 12 months, \$3,256.

W.W. Webb, Applied and Engineering Physics, Intergovernmental Personnel Act Agreement, NIH, 16 months, \$28,920.

W.W. Webb, Applied and Engineering Physics, Molecular Mechanisms of Biological Membrane Dynamics, NSF, 12 months, \$50,000.

R.A. Wentworth, Physical Biology, Percutaneous Absorption of ¹⁴C-Tris Phosphate in Weanling Pigs, Food and Drug Res Lab, 2 months, \$1,500.

R.N. White, Structural Engineering, Engineering Equipment Grant, NSF, 12 months, \$50,000.

J.R. Wiesenfeld, Chemistry, Atmospheric Chemistry of Electronically Excited Oxygen Atoms, NSF, 12 months, \$50,764.

B.T. Wilkins, Natural Resources, Sea Grant Advisory Services-Extended Jurisdiction, NYS-SUNY, 12 months, \$32,600.

Thursday, November 10, 1977

Bulletin Board

Bloodmobile to Be at Straight Road to Be Closed

The Tompkins County Red Cross will hold a bloodmobile from 9:30 a.m. to 3:15 p.m. on Friday, Nov. 18 at Willard Straight Hall. Sign up at the Straight Nov. 14, 15 or 16 to contribute a pint of blood.

The one-way road between Lynah Rink and Kite Hill parking lot will be closed to traffic between 6 a.m. and 5 p.m. Monday through Friday next week, the week of Nov. 14, for purposes of a traffic survey, according to the Cornell Department of Public Safety.

Medical College Panel

The Cornell Health Careers Service Organization is sponsoring a panel discussion by the Cornell Medical College Admissions Committee at 7:30 p.m., Wednesday, Nov. 16 in Kaufmann Auditorium, Goldwin Smith Hall. Pre-medical students are encouraged to attend.

Donlon Craft Fair Planned

The Fourth Annual Donlon Craft Fair will be held from 11 a.m. to 5 p.m. on Nov. 12, in Mary Donlon Hall. Cornell and area crafts-persons will display and demonstrate a wide variety of crafts.

Film, Talk on Eritrea Set

The Cornell Eritrea Committee will present a film and lecture program by Gerard Chaliand, a French scholar of national liberation struggles, on his recent tour of the Horn of Africa and his visit of the liberated areas of Eritrea. The program shall be presented at 7:30 p.m. on Nov. 16, in room 'D' of Goldwin Smith Hall.

Republican Club to Meet

The Cornell College Republicans will meet at 8 p.m., Tuesday, Nov. 15 in Uris Hall G-92.

Library Adds Tape Recordings

Uris Library has added to the tape recording collection which may be heard in the Media Room of the library. The latest additions are: David Grene's 1977 Messenger Lecture Series (6); Arno Mayer's Becker Lectures on "Crisis and War: 1870-1914" (3); Thomas Gold's "The Theory of Hearing: The Ear as a Regenerative Receiver;" Martin Lindauer's "The Biological Clock: Its Function and Mechanism" and Rene Welleck's "The New Criticism: Pro and Contra."

Wildlife Talk to Be Given

Aaron Moen, associate professor of wildlife ecology in the Department of Natural Resources at Cornell and research coordinator of the University's Arnot Forest, will speak on "Reflections on a Sabbatical Leave in the Woods of Minnesota. Thoughts after More than a Year," at 7:45 p.m. Monday, Nov. 14, at the Cornell Laboratory of Ornithology, 159 Sapsucker Woods Road.

The lecture is free and open to the public.

Budget Hearings Slated

The Priorities Committee of the Campus Council will hold open hearings in the next two weeks to discuss the preliminary budget statement submitted by University Provost David C. Knapp. The document "Suggested Budget Priorities and Policies" appeared in the Nov. 3rd issue of the Chronicle.

The first hearing will be at 7:30 p.m. Tuesday, Nov. 15, in Ives 117. The second hearing will be at 4:30 p.m. Monday, Nov. 21, tentatively scheduled in the North Campus Union.

Students, employees and faculty are invited to air their views on budget issues. Provost Knapp will be at both sessions to answer questions. Written statements on the budget will also be accepted at the Campus Council office in 133 Day Hall.

For more information on the hearings, contact Heidi Hutter at 257-0887.

Graduate Bulletin

(Sage Notes)

Graduate students interested in attending courses at Ithaca College this spring in the Exchange Program should check with the Graduate School immediately. Registration at Ithaca College is Jan. 9-13; the last day on which registration is permitted is Jan. 20. Arrangements must be made in advance for permission to enroll in the Exchange Program.

Applications for the National Science Foundation Graduate Fellowship Program are now available. Eligible undergraduate seniors or first-year graduate students may request preliminary application materials from the Fellowship Office, National Research Council, 2101 Constitution Ave., NW, Washington, D.C. 20418. The deadline for submission is Dec. 1. Additional information and preliminary applications may be obtained from the Fellowship Office, 116 Sage Graduate Center.

Eligible graduate students and faculty interested in postdoctoral funding should consider the National Science Foundation National Needs Postdoctoral Fellowship Program. Application materials should be requested from the Fellowship Office, National Research Council, 2101 Constitution Ave. NW, Washington, D.C. 20418. The deadline for filing applications is Dec. 5. Additional information and a limited number of applications may be obtained from the Fellowship Office, 116 Sage Graduate Center.

Graduate students should consult the Fellowship Notebook at their field office for information on fellowship programs for 1978-79. Check with your graduate faculty representative for further information and suggestions. Application deadlines for many programs are rapidly approaching.

Special Seminars

Agriculture and Life Sciences

JUGATAE: "Resource Patterns and Insect Search Tactics," Peter Kereiva and R.B. Root, 4 p.m., Monday, Nov. 14, Caldwell 100.

MICROBIOLOGY: "Nitrogen Fixation and Genetic Engineering," Aladar A. Szalay, 4:30 p.m., Thursday, Nov. 10, Stocking 124.

PLANT PHYSIOLOGY: "The Ultrastructure of Plant Senescence," William W. Thomson, University of California, Riverside, 11:15 a.m., Friday, Nov. 11, Plant Science 404.

PLANT PHYSIOLOGY: "Is Fruit Ripening a Typical Senescence Phenomenon," Jacob Biale, University of California, Los Angeles, 12:15 p.m., Tuesday, Nov. 15, Plant Science 404.

POMOLOGY: "Apple Insect Pests," John Leeper, 11:15 a.m., Monday, Nov. 14, Plant Science 114.

POULTRY BIOLOGY: "A New Look at Atherosclerosis," Catherine G. Fabricant, 4:15 p.m., Thursday, Nov. 10, Rice 201.

VEGETABLE CROPS: "Environmental Impact of Nitrogen Fertilization of Potatoes and Turf Grass," Chang-Chi Chu, Agway Research Center, 4:30 p.m., Thursday, Nov. 10, Plant Science 404.

Arts and Sciences

ANTHROPOLOGY: "Some Methodological Considerations in the Study of Complex Societies: An Archaeological Viewpoint," Craig Morris, 4:30 p.m., Wednesday, Nov. 16, McGraw 165.

CHEMISTRY BAKER LECTURE: "Challenges for the Near Future," Gabor A. Somorjai, University of California, Berkeley, 11:15 a.m., Thursday, Nov. 10, Baker Lab 119.

ORGANIC/INORGANIC CHEMISTRY: "Stereochemical Control in Hydrolysis," P. Deslongchamps, University of Sherbrook, 8:15 p.m., Monday, Nov. 14, Baker Lab 119.

Biological Sciences

BIOCHEMISTRY: "Electron Transfer and Oxygen Reduction Mechanism in Cytochrome Oxidase," Britton Chance, University of Pennsylvania, 4:30 p.m., Friday, Nov. 11, Stocking 204.

BIOCHEMISTRY: "Optical Properties of Photosynthetic Pig-

ments in Anisotropic Media," D. Frackowiak, Polytechnic University, Posan, Czechoslovakia, 12:20 p.m., Monday, Nov. 14, Wing Hall Library.

ECOLOGY AND SYSTEMATICS: "Photosynthesis in Desert Plants," Harold A. Mooney, Stanford University, 8:30 a.m., Wednesday, Nov. 16, Baker Lab 119.

ECOLOGY AND SYSTEMATICS: "Primary Production of Natural Grasslands in the Sahelian Region," C.T. deWitt, Laboratory for Theoretical Production Ecology, The Netherlands, 4 p.m., Wednesday, Nov. 16, Emerson 135.

NEUROBIOLOGY AND BEHAVIOR: "Polarized Light, an Orientation Cue for Honeybees," Martin Lindauer, Andrew D. White Professor-at-Large, 4:30 p.m., Monday, Nov. 14, Clark top floor.

Engineering

GEOLOGICAL SCIENCES: "Gravity, Magnetism and Basement-Cover Structure of the Allegheny Plateau-Valley and Ridge in W.V. and Adjacent States," Byron Kulander, Alfred University, 4:30 p.m., Tuesday, Nov. 15, Thurston 205.

MATERIALS SCIENCE AND ENGINEERING: "Energy Dependence of Displacement Damage Production in Metals," K. Merkle, Argonne National Lab, 4:30 p.m., Thursday, Nov. 10, Bard 140.

MECHANICAL AND AEROSPACE ENGINEERING: "Density Behavior of Low Temperature Pure and Saline Water and the Effects of Gravity Extrema on Buoyancy Induced Motions," Benjamin Gebhart, SUNY, Buffalo, 4:30 p.m., Tuesday, Nov. 15, Grumman 282.

PLASMA STUDIES: "Reversed-Field Ion Equilibrium Studies for 2XIIB," David Anderson, Lawrence Livermore Laboratory, 4:30 p.m., Wednesday, Nov. 16, Grumman 282.

THEORETICAL AND APPLIED MECHANICS: "Strange Happenings in Nonlinear Vibrations," Philip Holmes, 4:30 p.m., Wednesday, Nov. 16, Thurston 205.

Human Ecology

NUTRITIONAL SCIENCES: Title to be announced, Britton Chance, University of Pennsylvania, 4:30 p.m., Friday, Nov. 11, Stocking 204.

TEXTILES: "Ignition Processes in Single and Multicomponent Textile Structures," Elissa Pintauro, 4:30 p.m., Tuesday, Nov. 15, Martha Van Rensselaer 317.

Career Center Calendar

Nov. 10 — Northwestern University Graduate School of Management interviewing at Career Center.

Career Fantasy Workshop, 1:25-2:15 p.m. This is the first workshop in a series of three. The series is designed to help people organize ideas that seem unrealistic or impossible, and to use these ideas constructively in making career choices. Advance registration is required. Contact Career Center.

Nov. 11 — New York University Law School will hold interviews at Career Center. Make an appointment.

Nov. 14 — Career Exploration Series: Commercial Banking, 12:15-1:15 p.m. Living room, Sage Graduate Center.

University of Pennsylvania Law School holding interviews at Career Center. Make an appointment in advance.

The Job Hunt: a small group talk designed for non-technical students, 7-10 p.m., Career Center. Attendance at the talk will give students priority in signing up for on-campus interviews with employers looking for non-technical graduates. Register in advance.

Nov. 16 — Thunderbird Graduate School of International Management will hold interviews at the Career Center. Make an appointment.

Nov. 17 — Ray Williams, director of the College Venture Program, will interview students considering a leave of absence. Venture places students on leave in paid and volunteer positions. Interested students should make an appointment.

Nov. 17 — Career Fantasy Workshop, 1:25-2:15 p.m. Second in the series.

1 a.m. Tammany Niteclub presents Steve Berman, pianist. Risley College.

Sunday, November 13

7:30 p.m. Ecology House Film Series: "Lakes-Aging and Pollution." Ecology House, located off Triphammer Road.

Tuesday, November 15

4:15 p.m. Western Societies Program lecture: "British Policies Toward the Inner City: Lessons for or from America?" David McKay, University of Essex. Uris Hall 153.

7 p.m. Cornell Women's Badminton Club. Helen Newman. 8 p.m. CRESF Program: "Energy Strategy: The Road Not Taken," Amory Lovins, author of "World Energy Strategies" and "Soft Energy Paths." Moderated by Chandler Morse, economics, with responses by Robert Pohl, Physics, and Raymond Bowers, Science, Technology and Society. Sponsored by Eco-Justice Project, the Program on Values and Valuing, and Ecology House. Straight Memorial Room.

Wednesday, November 16

7:30 p.m. "Diseases of Insects," Gertrud Teator-Barsch. Sponsored by Graduate Women in Science. Emerson 135.

7:30 p.m. Cornell Eritrea Committee presents a film and lecture by Gerard Chaliand about his recent tour of Eritrea and the Horn of Africa. Goldwin Smith D.

Friday, November 18

9:30 a.m.-3:15 p.m. Red Cross Bloodmobile sponsored by Alpha Phi Omega. Sign-up in Straight Lobby Nov. 14, 15, 16. Straight Memorial Room.

Late Entries

Friday, November 11

12:15 p.m. CRESF Seminar: a multi-media slide show presenting the work being done in Ithaca's South Side neighborhood. Art Pearce, director of Ithaca Neighborhood Housing Services, will discuss goals, problems and progress. Uris Hall 202.

9 p.m.-3 a.m. *AKU and Willard Straight Board present "Pre-Concert Extravaganza," an evening of disco jazz and live music, hustle contest with cash prize. Straight Memorial Room.

10 p.m. Tammany Niteclub presents Marilyn Lipton: piano, guitar and vocals. Risley College.

12 midnight. Tammany Niteclub presents Lisa, Bonnie & Co. Risley College.

Saturday, November 12

7:30 p.m. "Eureka, I Have Found It," a multi-media slide show sponsored by Cornell Chinese Bible Study Group. Anabel Taylor Edwards Room.

7:30 & 10:30 p.m. *AKU in cooperation with Cornell Concert Commission and WVBR presents Jazz Weekend with Norman Connors in Concert with the Escorts. Statler Auditorium.

10 p.m. Tammany Niteclub presents Laura Schuett: guitar and vocals. Risley College.

12 midnight. Excerpts from the upcoming "Time Brings About a Change." Risley College.

12:30 a.m. Tammany Niteclub presents Rich Kirschner, magician. Risley college.

Calendar

Continued from Page 12

10 a.m. Ithaca Society of Friends (Quakers). Discussion and First Day School. Babysitting provided. Anabel Taylor Forum.

11 a.m. Ithaca Society of Friends (Quakers). Meeting for worship. Anabel Taylor Forum.

11 a.m. Sage Chapel Convocation: Jack Riemer, Rabbi, Beth Abraham Synagogue, Dayton, Ohio.

11:15 a.m. Protestant Church at Cornell. Anabel Taylor Chapel.

2 p.m. *Cornell Cinema presents "The Kid." Uris Hall Auditorium.

5 p.m. Catholic Mass. All welcome. Anabel Taylor Auditorium.

6 p.m. *Hillel Deli Dinner and Lecture: "Wisdom for the End of Life: Some Insights into Death and Dying." Jack Riemer. Reservations must be made at Anabel Taylor G-34 by Nov. 17.

Anabel Taylor One World Room.

8 p.m. *Cornell Cinema presents "Working Class Goes to Heaven." Uris Hall Auditorium.

8:15 p.m. *Faculty Committee on Music presents Boston Symphony Chamber Players Concert. Statler Auditorium.

9 p.m. Coffeehouse with K.J. and Fall Creek. Free and open to Cornell community. Sponsored by North Campus Union Program Board. North Campus 1st floor lounge.

Exhibits

Herbert F. Johnson Museum: "A Taste of Color," through Nov. 29; "Artists at Cornell," through Nov. 13; "The Selective Eye: Photographs by Benjamin Hertzberg," through Nov. 20;

Edwin Dickinson, through Dec. 23.

Calendar

November 10-20

All items for the Chronicle Calendar must be submitted by mail or in person to Fran Apgar, Office of Central Reservations, 32 Willard Straight Hall, at least 10 (ten) days prior to publication of the Chronicle.

* Admission charged

Attendance at all events is limited to the approved seating capacity of the hall.

Thursday, November 10

- 12 noon. Catholic confessions. Anabel Taylor G-24.
 12:15 p.m. Catholic Mass. All welcome. Anabel Taylor G-19.
 12:15 p.m. Eucharist Episcopal Church at Cornell. Anabel Taylor Chapel.
 12:15 p.m. Floriculture and Ornamental Horticulture Seminar. "Land Use Information Retrieval System." Peter J. Trowbridge. Plant Science 37.
 4 p.m. Graduate Study in Management general information meeting sponsored by the Office of Admissions and Student Affairs of the Graduate School of Business and Public Administration. Malott 216.
 4 p.m. Open Prose and Poetry reading. Everyone welcome. Goldwin Smith Temple of Zeus.
 4 p.m. *Cornell Cinema, Astronomy and Anthropology Departments present "Ascent of Man." Bronowski. Time-Life Series. parts 11, 12 & 13: "Knowledge or Certainty," "Generation Upon Generation," "The Long Childhood." Uris Hall Auditorium.
 4:30 p.m. Buddhist precepts and sermon, Venerable Phra Rajavaramuni, Deputy Secretary-General of Maha Chulalongkorn Buddhist University and Abbot of Wat Phra Pirerdra Monastery, Bangkok. All welcome to observe and or to participate. Anabel Taylor Founders Room
 4:30 p.m. Astronomy and Space Sciences Colloquium "The Case Against Two-Faced Janus." K. Aksnes, Center for Astrophysics, Harvard. Space Science 105.
 4:40 p.m. Debye Lecture Series in Chemistry: "New Routes to Tetracyclines." Gilbert Story, Chemistry, Columbia University.
 5:15 p.m. Catholic Mass. All welcome. Anabel Taylor G-19.
 5:30 p.m. Explorations of the Siddur: historical record of the development of Jewish consciousness. Anabel Taylor 314.
 6:30 p.m. Hebrew Conversation: Beginners. Anabel Taylor 314.
 7:30 p.m. Fundamentals of Jewish Thought. Anabel Taylor G-30.
 7:30 p.m. Israeli Folk Dancing. Anabel Taylor One World Room.
 8 p.m. Cornell Graduate Christian Forum Lecture: "Technical Development and Theological Fallout." Ives 110.
 8 p.m. Latin America Free Film Series: "Camilo Torres: Guerrilla Priest" and at 9 p.m. "Pablo Neruda: Poet." Uris Hall Auditorium.
 8:30 p.m. Backgammon Club. Noyes Center 3rd floor lounge.
 8:30 p.m. "Thursday's" coffeehouse with Mark Rust: guitar and vocals. Free and open to Cornell community. Sponsored by Willard Straight Board. Straight Memorial Room.

Friday, November 11

- 12 noon. Catholic confessions. Anabel Taylor G-24.
 12:15 p.m. Catholic Mass. All welcome. Anabel Taylor Chapel.
 12:15 p.m. Women's Studies Friday Seminar: "The Social and Legal Effects of No-Fault Divorce on Women." Lenore Weitzman, California Divorce Law Project, University of California at Berkeley. I&LR Conference Center 105.
 1 p.m. SALAT-AL-JUMA (Friday prayer for Muslims). Anabel Taylor Edwards Room.
 3-7 p.m. Happy Hour. North Campus Thirsty Bear Tavern.
 4-6 p.m. Happy Hour. Noyes Center Pub.
 4:15 p.m. Coalition for the Right to Eat meeting. Anabel Taylor Forum.
 4:30 p.m. Shabbat Service (Orthodox). Young Israel House.
 5:30 p.m. Shabbat Service (Conservative). Anabel Taylor Founders Room.
 6:30 p.m. *Hillel Shabbat Dinner. Reservations must be made by Nov. 10 at Anabel Taylor G-34. Anabel Taylor One World Room.
 7 p.m. *Cornell Cinema presents "Jazz on a Summers Day." Straight Theatre.
 7:15 p.m. Cornell Christian Fellowship meeting for singing, prayer and fellowship. All welcome. Anabel Taylor Edwards Room.
 7:30 p.m. Dungeons and Dragons meeting. Uris Hall G-94.
 7:30 p.m. *Cornell Freshman Football Milford Academy. Schoellkopf.
 7:30 p.m. Pentangle II Free Film Series: "Passion of Joan of Arc" (Dreyer, 1928, France); short "Meshes of the Afternoon" (Deren, 1943, U.S.). Uris Hall Auditorium.
 8:15 p.m. Contemporary Music Festival: New Music from Cornell by Bates, Dorff, Hilliard, Ragnarsson. Barnes Auditorium.
 8:15 p.m. *Modern Dance Concert by Sara Rudner Performance Ensemble. Statler Auditorium.
 9 p.m. *Cornell Cinema presents "Night at the Opera" and "Horse Feathers." Straight Theatre.
 9:30 p.m. *Cornell Cinema presents "Rocky." Uris Hall Auditorium.
 12 midnight. *Cornell Cinema presents "Rocky Horror Picture Show." Uris Hall Auditorium.

Saturday, November 12

- 9:30 a.m. Shabbat Service (Conservative). Anabel Taylor Founders Room.
 9:30 a.m. Shabbat Service (Orthodox). Anabel Taylor Edwards Room.
 11 a.m.-5 p.m. Fourth Annual Donlon Craft Fair. Mary Donlon.
 4:30 p.m. Catholic confessions. Anabel Taylor G-24.
 5:15 p.m. Catholic Mass. All welcome. Anabel Taylor Auditorium.
 7 p.m. *Cornell Cinema presents "Jazz on a Summers Day." Straight Theatre.
 7:30 p.m. Dungeons and Dragons meeting. Uris G-94.
 8 p.m. Risley Free Film Series presents "The Omega Man." Risley Theatre.
 8 p.m. *Cornell Outing Club square dance with Jean Alve calling. Straight Memorial Room.
 8:15 p.m. Contemporary Music Festival: New Music from Cornell by Berk, Gray, Heller, Ng Quinn, Pellman. Barnes Auditorium.
 9 p.m. *Cornell Cinema presents "Night at the Opera" and "Horse Feathers." Straight Theatre.
 12 midnight. *Cornell Cinema presents "Rocky Horror Picture Show." Uris Hall Auditorium.

Sunday, November 13

- 9:30 & 11 a.m. Catholic Mass. All welcome. Coffee hour follows Mass. Anabel Taylor Auditorium.
 9:30 a.m. Episcopal Church Worship Service. Sunday school and nursery provided. Anabel Taylor Chapel.
 10 a.m. Ithaca Society of Friends (Quakers). Discussion and First Day School. Babysitting provided. Anabel Taylor Forum.
 11 a.m. Ithaca Society of Friends (Quakers). Meeting for worship. Anabel Taylor Forum.
 11 a.m. Sage Chapel Convocation: Herbert W. Richardson, St. Michael's College, University of Toronto.
 11:15 a.m. Protestant Church at Cornell. Anabel Taylor Chapel.
 1 p.m. Hillel Shabbat Workshop: a practical workshop. Jewish catalog style. Goldwin Smith 164.
 2 p.m. *Cornell Cinema presents "The Yearling." Uris Hall Auditorium.
 4 p.m. Contemporary Music Festival with chamber music by Karel Husa and Robert Palmer. Barnes Auditorium.
 5 p.m. Catholic Mass. All welcome. Anabel Taylor Auditorium.
 6:30 p.m. Hebrew Conversation: Beginners. Anabel Taylor 314.
 8 p.m. *Cornell Cinema presents "Battle of Algiers." Uris Hall Auditorium.
 9 p.m. Coffeehouse with Lisa Rubin. Free and open to Cornell community. Sponsored by North Campus Board. North Campus 1st floor lounge.

Monday, November 14

- 12 noon. Catholic confessions. Anabel Taylor G-24.
 12:15 p.m. Catholic Mass. All welcome. Anabel Taylor G-19.
 4:30 p.m. Psychology, Language and Thought Lecture Series: "Scholars and 'Negative Rationalism.'" Ragnar Rommetveit, Psychology, University of Oslo and A.D. White Professor-at-Large. Goldwin Smith Kaufmann Auditorium.
 4:30 p.m. University Lecture: "Using Their Freedom." The Ex-Slaves and Their Schools, 1861-1867." Herbert G. Gutman, Smith College. Ives 110.
 7:30 p.m. Yiddish Conversation. Anabel Taylor 314.
 7:30 p.m. "America and World Community": "Consciousness and World Community." David Spangler. Anabel Taylor One World Room.
 7:45 p.m. Ornithology Seminar. Stuart Observatory, 159 Sapsucker Woods Road.
 9 p.m. *Cornell Cinema presents "Aparajito." Film Club members only. Uris Hall Auditorium.

Tuesday, November 15

- 12 noon. Catholic confessions. Anabel Taylor G-24.
 12:15 p.m. Catholic Mass. All welcome. Anabel Taylor G-19.
 12:15 p.m. Cornell Women's Caucus. Ives 118.
 4:30 p.m. Food Science 600 Seminar: "Potential Relationship Between Protein Intake and Carcinogenicity of Certain Compounds." T. Colin Campbell, Nutritional Sciences. Stocking 204.
 4:45 p.m. Marine Biology Film: "Captain James Cook." Plant Science 202.
 5:15 p.m. Catholic Mass. All welcome. Anabel Taylor Chapel.
 7:30 p.m. Folk Dancing for couples. Singles, beginners, all ages welcome. Plant Science 404.
 7:30 p.m. University Lecture: "The Young Albert Einstein." Jagdish Mehra, Physics, The Solvay Institute of the Free University of Brussels. Clark 700.
 7:30 p.m. *1977 Season Highlights; Big Red Marching Band, Marice Stith, director; Rich Bonnano, drum major; Chris Myer, feature twirler. Bailey Hall.
 8 p.m. *Cornell Cinema presents "Monsieur Verdoux." Uris Hall Auditorium.

Wednesday, November 16

- 12 noon. Catholic confessions. Anabel Taylor G-24.
 12:15 p.m. Catholic Mass. All welcome. Anabel Taylor G-19.
 4 p.m. Pandaemonium Germanicum (German Students Club) Lecture: "Der Eregire, Iantlose Tristan." Michael Twomey, Goethe Prize Winner 1976-77. Goldwin Smith 177.
 4:30 p.m. Office of Computer Services Seminar: "Writing from Scratch-Micro Computers, Text Editor and the Student." Ken Skier, Harvard. Uris Hall G-14.
 4:30 p.m. Biophysics Seminar: "Effector Functions of Immunoglobulin G." David M. Segal, National Cancer Institute. Clark 700.
 4:30 p.m. Psychology, Language and Thought Lecture Series: "The Construction of Human Intersubjectivity." Ragnar Rommetveit, Psychology, University of Oslo and A.D. White Professor-at-Large. Goldwin Smith Kaufmann Auditorium.
 5 p.m. Episcopal Church at Cornell Evening Prayer. Anabel Taylor Chapel.
 7:30 p.m. Ideological Conflicts in Judaism. Anabel Taylor Forum.
 7:30 p.m. Hebrew Conversation: Intermediates. Anabel Taylor 314.

Thursday, November 10, 1977

- 7:30 p.m. "America and World Community": "Consciousness and World Community." Eldon Kenworthy. Government. Anabel Taylor One World Room.
 8 p.m. *Cornell Cinema presents "The World of Abu." Uris Hall Auditorium.

Thursday, November 17

- 12 noon. Catholic confessions. Anabel Taylor G-24.
 12:15 p.m. Catholic Mass. All welcome. Anabel Taylor G-19.
 12:15 p.m. Eucharist Episcopal Church at Cornell. Anabel Taylor Chapel.
 12:15 p.m. Floriculture and Ornamental Horticulture Seminar: "A Summer Nursery Internship in Southern California." Mark Sellow. Plant Science 37.
 4 p.m. Open Prose and Poetry reading. Everyone invited. Goldwin Smith Temple of Zeus.
 4 p.m. Graduate Study in Management general information meeting sponsored by the Office of Admissions and Student Affairs of the Graduate School of Business and Public Administration. Malott 216.
 4:30 p.m. Astronomy and Space Sciences Colloquium: "Supergiants and Supernovae: Recent Studies at the Herzberg Institute of Astrophysics." L.A. Higgs, Ottawa. Space Science 105.
 7 p.m. Cornell Women's Badminton Club. Helen Newman.
 5:15 p.m. Catholic Mass. All welcome. Anabel Taylor G-19.
 5:30 p.m. Explorations of the Siddur: historical record of the development of Jewish consciousness. Anabel Taylor 314.
 6:30 p.m. Hebrew Conversation: Beginners. Anabel Taylor 314.
 7:30 p.m. Fundamentals of Jewish Thought. Anabel Taylor G-30.
 7:30 p.m. Israeli Folk Dancing. Anabel Taylor One World Room.
 8 p.m. Archaeological Institute of America Lecture: "Reconstructing an Ancient Greek Ship." J. Richard Steffy, American Institute of Nautical Archaeology. Franklin 115.
 8 p.m. *Cornell Cinema presents "Born Yesterday." Co-sponsored by Cornell Law School. Uris Hall Auditorium.
 8:30 p.m. Backgammon Club. Noyes Center 3rd floor lounge.
 8:30 p.m. "Thursday's" coffeehouse with Blue By Two country bluegrass duo. Free and open to Cornell community. Sponsored by Straight Hall Board. Straight Memorial Room.

Friday, November 18

- 12 noon. Catholic confessions. Anabel Taylor G-24.
 12:15 p.m. Catholic Mass. All welcome. Anabel Taylor G-19.
 12:15 p.m. Women's Studies Friday Seminar: "Women and the Family in the Kibbutz." Rachele Taqqu, Tompkins Cortland Community College. I&LR Conference Center 105.
 1 p.m. SALAT-AL-JUMA (Friday prayer for Muslims). Anabel Taylor Edwards Room.
 3-7 p.m. Happy Hour. North Campus Thirsty Bear Tavern.
 4-6 p.m. Happy Hour. Noyes Center Pub.
 4:15 p.m. Coalition for the Right to Eat meeting. Anabel Taylor Forum.
 4:30 p.m. Psychology, Language and Thought Lecture Series: "Piaget's Psychology of Language: An Experimental Critique." Ragnar Rommetveit, Psychology, University of Oslo and A.D. White Professor-at-Large. Goldwin Smith Kaufmann Auditorium.
 4:30 p.m. Shabbat Service (Orthodox). Young Israel House.
 5:30 p.m. Shabbat Service (Conservative). Anabel Taylor Founders Room.
 5:30 p.m. Shabbat Service (Reform). Anabel Taylor Chapel.
 7 & 9 p.m. *Cornell Cinema presents "Fun With Dick and Jane." Straight Theatre.
 7:15 p.m. Cornell Christian Fellowship meeting for singing, prayer and fellowship. Anabel Taylor Edwards Room.
 7:30 p.m. *Cornell Varsity Hockey-York University. Lynah Rink.
 7:30 p.m. Dungeons and Dragons meeting. Uris Hall G-94.
 7:30 p.m. Pentangle II Free Film Series: "Capricious Summer" (Menzel, 1968, Czech); short "Chinese Firedrill" (Hindie, 1968, U.S.). Uris Hall Auditorium.
 8:15 p.m. Department of Music presents student recital: Cathy Craver, flutist, and Paul Rosenbloom, pianist. Works of Bach, Doppler, Martinu, Poulenc. Barnes Auditorium.
 8:30 p.m. *Cornell Folk Song Club Concert featuring Bob White. Goldwin Smith Kaufmann Auditorium.
 9:30 p.m. *Cornell Cinema presents "Carrie." Uris Hall Auditorium.
 12 midnight. *Cornell Cinema presents "Repulsion." Uris Hall Auditorium.

Saturday, November 19

- 9:30 a.m. Shabbat Services (Conservative). Anabel Taylor Founders Room.
 9:30 a.m. Shabbat Services (Orthodox). Anabel Taylor Edwards Room.
 12 noon. Cornell Rugby Club-York University. Upper Alumni Field.
 4 p.m. Cornell Chorus Concert. Thomas A. Sokol, conductor. Pergolesi Stabat Mater, Chabrier A la Musique. Sage Chapel.
 4:30 p.m. Catholic confession. Anabel Taylor G-24.
 5:15 p.m. Catholic Mass. All welcome. Anabel Taylor Auditorium.
 7 & 9 p.m. *Cornell Cinema presents "Fun With Dick and Jane." Straight Theatre.
 7 & 9 p.m. *Cornell Cinema presents "Carrie." Uris Hall Auditorium.
 7:30 p.m. Dungeons and Dragons meeting. Uris Hall G-94.
 7:30 p.m. *Cornell Varsity Hockey-York. Lynah Rink.
 8:15 p.m. *University Unions Program Board and Tim Brings About a Change Theatre Group present "An Evening of Soul," a musical with dance, song and poetry illustrating the history of Blacks in America. Statler Auditorium.
 12 midnight. *Cornell Cinema presents "Repulsion." Uris Hall Auditorium.

Sunday, November 20

- 9:30 & 11 a.m. Catholic Mass. All welcome. Coffee hour follows Mass. Anabel Taylor Auditorium.
 9:30 a.m. Episcopal Church Worship Service. Sunday school and nursery provided. Anabel Taylor Chapel.

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