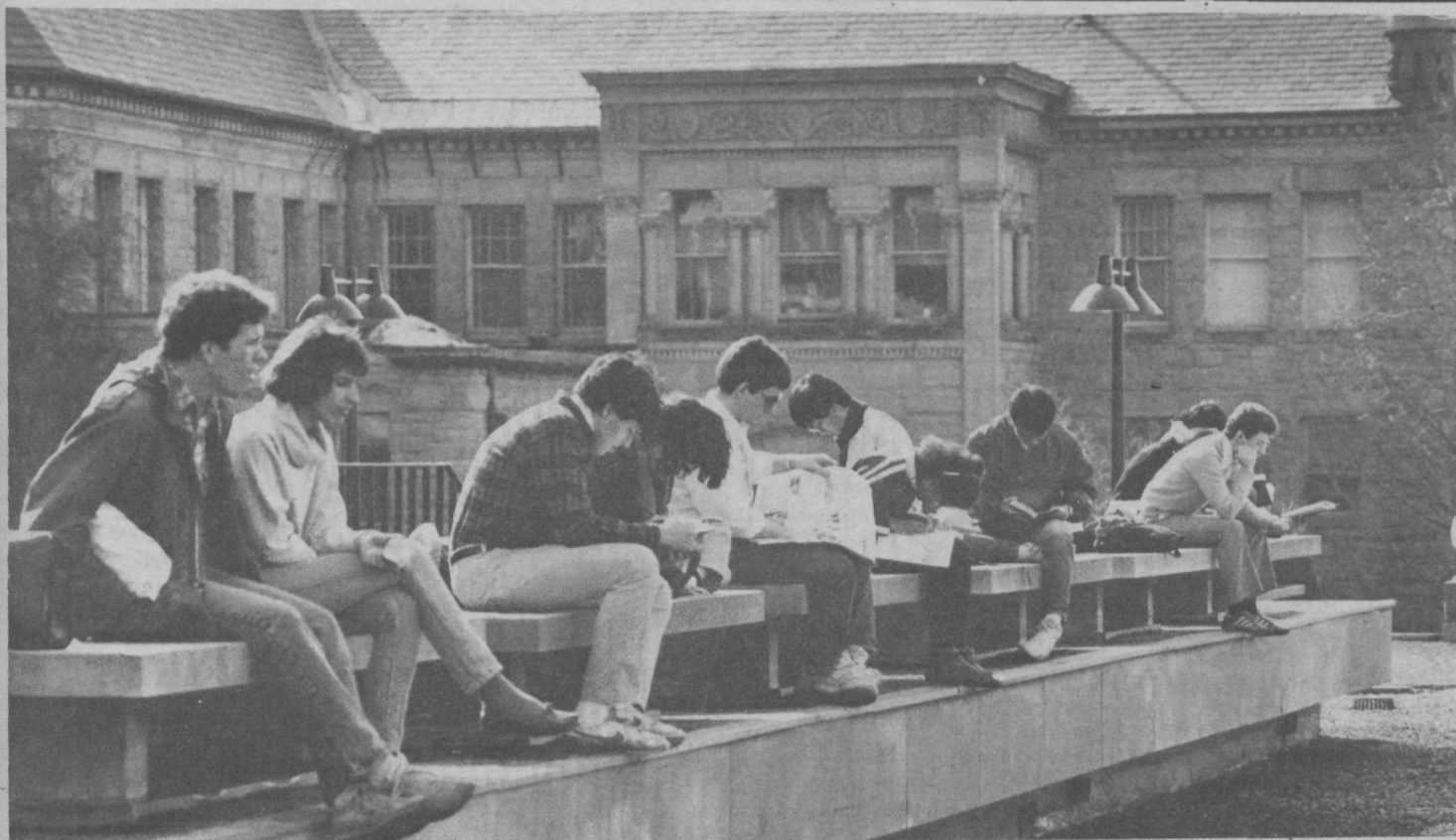


Cornell Chronicle

Volume 17, Number 25

Thursday, March 13, 1986



A spurt of spring Monday brought studiers and sitters to the benches at Olin Library and elsewhere on campus.

Cornell Raps Indirect-Cost Ceiling Plan For Research

Cornell says it could support a national policy of awarding fewer sponsored research contacts — but with full overhead reimbursement — if the government cannot afford its “fair share” of administering university-based research.

This statement was made in response to the federal Office of Management and Budget's plan to set a ceiling on administrative indirect cost recoveries. The ceiling, scheduled to go into effect April 1, would force Cornell to absorb \$750,000 in costs this year and as much as \$5 million a year beginning in 1987, university officials estimate.

Replying to the OMB proposal, Cornell Provost Robert Barker asked that implementation of the indirect cost ceiling be delayed for further study. Thorough study of the indirect cost recovery system and negotiations among federal agencies and research institutions are needed before changes are made, the provost said in a March 6 letter to OMB.

“The university cannot provide alternate funding and would have to reduce either its total research program or drastically cut the current level of support provided to the research community, an action that would seriously undermine the quality of research here,” he added.

“We would be willing to support an overall decrease in the total number of grant awards made by federal agencies if the principle of full funding of the university's real costs in conducting and administering research is maintained,” Barker wrote.

To decrease federal funding for research, at a time when the nation faces challenges to its economic and technological supremacy, would be unwise, Barker wrote in his reply to the OMB proposal, a revision to Circular A-21, “Cost Principles for Educational Institutions.”

“It would be far more preferable to fully fund those research programs the government

Continued on Page 5

Culture of Gypsies to Be Explored Here

A conference on the language and culture of the Gypsies will be held here Friday, March 14.

The conference will include lectures on the Gypsies during the Holocaust and in America, and the problems of conducting anthropological studies of their society and culture.

There also will be a 4:15 p.m. showing of the fiction-documentary film on Gypsy life, “Angelo, My Love,” directed by Robert Duval.

Free to the public, the conference will start at 1 p.m. and be held in Room L-04 of Uris Library.

The conference is aimed at developing a deeper understanding and appreciation of the culture of a people widely persecuted throughout history.

“The study of Gypsies sheds light on the whole idea of difference in society,” said

Kitty Mattes, associate director of Cornell's Western Societies Program.

“It's one way of looking at how a group seen as outcasts functions in relation to mainstream practices and values.”

A nomadic people often living as musicians and fortune tellers and with no written history, Gypsies are believed to have originated in India. Historical evidence of their eventual migrations throughout Europe and North Africa, and eventually the entire world, can be traced back to 1000 A.D.

The opening lecture, titled “Luck on the Road: Problems of Field Work Among the Gypsies,” will be given by Susan DiGiacomo, visiting professor of anthropology at Cornell.

At 2:15 p.m., anthropologist A. Gabrielle Tyrnauer of Concordia University in Mon-

tréal will discuss “Gypsies in the Holocaust.”

Cornell professor of Classics and linguistics, Gordon Messing, will offer “Remarks on the Gypsy Language,” beginning at 3:15 p.m.

The conference will conclude with a 7 p.m. lecture by Ian F. Hancock, a linguistics professor at the University of Texas at Austin, on the subject “Gypsies in America.” He is descended from Gypsies and has been a U.S. delegate to the United Nations for the World Romani Union.

The conference is sponsored by Cornell's Western Societies Program in cooperation with the Society for the Humanities, Department of Modern Languages and Linguistics, University Lectures Committee, and the James Norris Oliphant Fellowship.

Songbirds Use Radio Technique, Biologists Report

By ROGER SEGELKEN

The Sunday concerts with trained canaries, sponsored by a birdseed company, came across the radio airwaves so clearly folks swore there was a budgie in their Philco.

Now, Cornell neurobiologists have found the principle of AM radio working in a bird.

Black-capped chickadees — and perhaps some other songbirds, too — produce their distinctive calls by mixing sounds of different frequencies, Stephen Nowicki and Robert R. Capranica report in the March 14 issue of the journal *Science*.

Their “chick-a-dee-dee” sound is a product of amplitude modulation, the same process used to produce the AM radio signals that brought singing canaries into thousands of homes during the 1950s.

A chickadee's vocal organ, the syrinx, has two parts. They were once thought to operate independently, with two voices singing a kind of “internal duet.” Instead, the Cornell biologists report, the bird produces a sound with multiple frequency components that result from an interaction between two signals from two parts of the syrinx.

That's how AM radio works: A high-frequency carrier wave is modulated (or varied) by a second, lower-frequency program signal (the voice or music). The results of this mixing, called heterodyning, are new frequencies

(called side bands) that are the sum of and difference between the two original frequencies.

AM radio requires vacuum tubes and transistors in amplifiers; the black-capped chickadee needs only its tiny syrinx, according to the Cornell researchers. Chickadees are the first animals known to use amplitude modulation that is the result of heterodyning.

So far, the research has been conducted with *Parus atricapillus*, the frequent visitor to bird feeders throughout much of North America. The Cornell researchers expect their findings may apply to other songbirds. Knowing the way songbirds control and change their calls may help scientists understand how language is developed in humans, one of the few other animals that must learn communication skills by imitating adults.

Chickadees and a few other species are unusual among birds in that they can change their sounds continually throughout their lives. That helps chickadees in winter when four or five pairs band together in small flocks with closed memberships, and jealously guard territories with limited supplies of food.

“When flocks first come together, they have somewhat different calls, with different distributions of energy in the syllables,” Nowicki explains. “As little as one week later —

which is particularly rapid — they have converged on a call with similar acoustic characteristics.”

“Every year, as flocks reform and memberships change, the flocks converge on a new signal,” Nowicki continues. “We have shown this by forming experimental flocks in captivity.”

And, as in humans, one side of a bird's brain seems to have greater control than the other over the production of sound, Nowicki observes. “By understanding how the two sides of the chickadee's syrinx interact, we are getting a better idea how the vocal system is controlled by the brain,” he says.

The Cornell biologists are developing greater respect for songbirds' talents.

“At first we were hard put to hear the differences between calls of the different flocks,” Nowicki remembers. “As soon as I realized that this frequency interval — produced by amplitude modulation — might be the key, I figured out how to tell the difference.”

“If you had perfect pitch, you could remember each flock's call. But I don't. Perhaps birds have a better sense of pitch than humans.”

Stephen Nowicki, a graduate student in neurobiology and behavior at Cornell when this research was conducted, is now a postdoctoral associate at the Rockefeller Univer-



sity Field Research Center. Robert R. Capranica is a professor of electrical engineering and of neurobiology and behavior at Cornell. Their studies were supported by the National Institutes of Health, the National Academy of Sciences, Sigma Xi, the American Ornithologist's Union, and Cornell.

Budget Proposal Includes 4.5% Salary Pool for Faculty and Staff

A 4.5 percent increase in the faculty and staff salary pool to provide cost-of-living and merit-based pay raises for 1986-87 is included in a proposal to be presented to the Board of Trustees next week.

The budget plan was outlined Tuesday by Provost Robert Baker at a meeting sponsored by the University Assembly.

The costs of employee benefits are expected to increase \$1.2 million, because of

higher health care and insurance costs, Barker said.

“I don't think anybody is ever satisfied; that's true of any budget,” said W. Donald Cooke, a professor of chemistry, director of the occupational health and safety program, and chairman of the faculty budget committee.

“Our committee understood that it's going to be a year that's somewhat more dif-

ficult than others.”

The budget calls for a 9.5 percent increase in endowed tuition, to \$11,500. Undergraduate tuition in the statutory units will increase 6.7 percent to \$4,650 for New York State residents and 9.2 percent to \$8,100 for non-residents. The statutory tuition increases must be approved by SUNY and the State Legislature, in addition to Cornell's trustees. Cornell will spend \$12.5 million from its

1986-87 general purpose budget on student financial aid, a 17 percent increase above the current year, under the proposal.

The financial contribution expected of parents will increase 7.5 percent next year, while the average student self-help level will increase 3.7 percent, according to Susan H. Murphy, dean of admissions and financial aid. Full student need, as defined by the uni-

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PEOPLE

Robert Wilson Wins Award In California

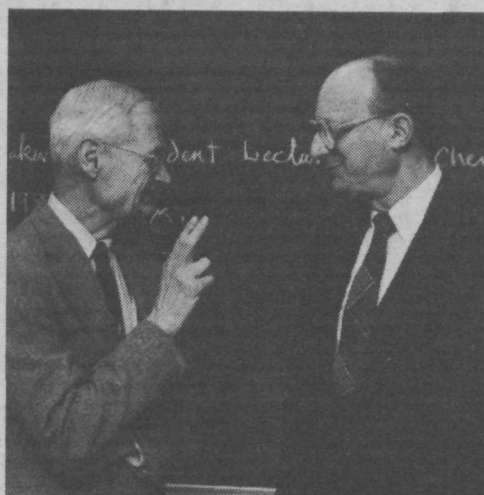
Robert R. Wilson, professor of physics emeritus here, is to receive the 1986 Wright Prize for interdisciplinary scientific achievement from Harvey Mudd College tonight during a ceremony in Claremont, Calif.

Wilson, for whom Cornell's synchrotron laboratory is named, is also a sculptor. His works are displayed in galleries across the country.

Wilson gave a public lecture on "Art, Architecture, and Physics" at Harvey Mudd Monday, March 10, and is spending this week on the California campus, where he is giving seminars and a colloquium.

The award includes a \$20,000 cash prize and a bronze sculpture.

Wilson is also an emeritus professor at Columbia University and the University of Chicago.



William T. Miller, professor of chemistry emeritus, left, recounts the history of the Baker Lectures at the Department of Chemistry's 60th anniversary celebration for the series. Presentations by Stuart A. Rice, the 1986 Baker Lecturer, continue through March 26.

AWARDS

Biology

Jeffrey K. Conner, a Ph.D. candidate in the Section of Neurobiology and Behavior, has received the 1986 Robert H. Whittaker Award in recognition of a paper he gave at the tenth annual symposium sponsored by the Ecology and Evolutionary Biology Graduate Student Association.

Conner's paper, "Measuring selection in a natural population of a fungus beetle, *Bolitotherus cornutus*," was selected on the basis of the quality of both the research and the oral presentation. Sara J. Cairns, a Ph.D. student in the Section of Neurobiology and Behavior, received Honorable Mention for her paper, "The social flop in African lions."

The award was established by the Section of Ecology and Systematics to commemorate the achievements and leadership of Professor Robert H. Whittaker, a member of the section's faculty from 1968 until his death in 1980.

Geology

Three geology majors at Cornell have been awarded memorial prizes.

Edward R. Sobel, a senior, has been awarded the Chester Buchanan Memorial Scholarship. The \$1,000 award was established in 1936 by Claire F. Buchanan in memory of her son who majored in geology in Cornell and who was killed in an airplane accident in Texas.

Paul A. Scott and John M. Berner, both seniors, have been awarded the Michael W. Mitchell Memorial Prize. They will share the \$1,000 prize that was established in 1960 by Stephen A. Mitchell and friends in memory of his son, who majored in geology at Cornell and who died in a mining accident in New Mexico in 1959.

Pomology

Roger Way, retired professor of pomology at the New York State Agricultural Experiment Station in Geneva, has received the coveted Golden Apple Award.

The Western New York Apple Growers Association, Inc. and The New York Cherry Growers Association, Inc. presented Way

with the award, which is given to industry leaders who have made a significant contribution to the New York fruit industry. The award highlights Way's 36 years of fruit breeding and research at the Geneva Station. He has been involved in the breeding of apples, cherries and elderberries and has named and introduced important varieties of these fruits. Besides this, Way has worked on virus and nursery problems, hardiness and improved cultural practices of fruit.

Engineering

William F. Albern, manager of the energy management group of the university's facilities engineering department, has been named "Engineer of the Year" by the Broome Chapter of the New York State Society of Professional Engineers.

Albern, a registered professional engineer, has been in the field 35 years, including the past 12 at Cornell. The group cited Albern for "significant engineering contributions" in new construction and renovation projects, and for his involvement in the state society of professional engineers and the American Society of Heating, Ventilating, and Air Conditioning Engineering.

Henderson Reappointed Archaeology Director

John S. Henderson has been reappointed director of the Intercollege Program in Archaeology here for a two-year term through June 30, 1987. He has served as director of the program since 1982.

Henderson, an associate professor of anthropology in the College of Arts and Sciences, is internationally renowned for his work in anthropological archaeology. He has conducted research and excavations in Mexico, Honduras, Peru, Cyprus, and the United States. His book tracing the development of Maya societies, "The World of the Ancient Maya," has been widely acclaimed by anthropologists and was offered as an alternate selection by the History Book Club and the Macmillan Book Clubs (Natural Science Book Club).

Since 1979, Henderson has been director of a long-term archaeological project sponsored by the Honduran government to reconstruct the prehistory of Sula Valley in northwestern Honduras.

10 Cornell Faculty Members Serve As State Project 2000 Panelists

Ten Cornell faculty members and administrators are serving on eight Project 2000 panels named by New York State Gov. Mario M. Cuomo.

The panels are examining issues ranging from economics, demographics, and criminal justice to energy, the environment, and science and technology.

Their purpose is to identify and examine key opportunities and challenges facing the state through the balance of the century and beyond.

The Cornell members and the panels on which they serve are:

- David J. Allee, professor of resource economics, water resources.
- Vernon Briggs, professor of industrial and labor relations, economic development.
- Paul R. Eberts, associate professor of rural sociology, population and demographics.
- Lois Gray, associate dean and director

of extension in the School of Industrial and Labor Relations, economic development.

- Alfred Kahn, the Robert Julius Thorne Professor of Political Economy, electricity.
- Walter Lynn, director of the Science, Technology, and Society Program, science and technology.
- Richard Schuler, associate professor of environmental engineering and associate professor of economics, electricity.
- Bruce T. Wilkins, professor of natural resources, water resources.
- Christopher Wilkinson, director, Institute for Comparative and Environmental Toxicology, water resources.
- Kenneth G. Wilson, director, Center for Theory and Simulation in Science and Engineering, science and technology.

New York State Project 2000 is being coordinated by the Rockefeller Institute of Government of the State University of New York.

Zuiches Takes Washington State Post

James J. Zuiches, associate director for research in the College of Agriculture and Life Sciences, has been appointed associate dean and director of research for the College of Agriculture and Home Economics at Washington State University in Pullman, effective July 15.

A member of the Cornell faculty since 1982, Zuiches also has served as professor of rural sociology and associate director of the Cornell University Agricultural Experiment

Station at Ithaca. Previously, he was program director for sociology at the National Science Foundation and an associate professor of sociology at Michigan State University.

McDaniel-Campus Store

Richard W. McDaniel has been named director of the Cornell Campus Store. He succeeds Harry W. Chaskey, who retired in January after 15 years as the store's director.

McDaniel, who was associate director, joined the store in 1975 as business manager.

Title Listed Incorrectly

In last week's story about new Presidential Young Investigators, Kenneth C. Hover was incorrectly identified as an assistant professor. He is an associate professor of structural engineering.

Jermy-Summer Session

Charles W. Jermy Jr., associate dean of the Division of Summer Session, Extramural Study, and Related Programs, is serving as acting dean through May 31 while Dean Robert D. MacDougall is on leave. A member of the Division staff since 1973, Jermy has been associate dean since 1981.

Many Start-Up Problems Come With Changeover to System 85

By PAT PAUL

Centrex service on campus was disconnected last week, but many problems related to the new System 85 are still unresolved. By the end of the day March 7, the Department of Telecommunication had handled hundreds of trouble reports and hundreds of inquiries. Many people experienced ring/no answers the first two or three days due to software problems on extensions. Those problems have been corrected, but the volume of trouble calls coming in is still too large to handle effectively.

As start-up problems are resolved, more timely service should be provided. Although the department is trying to call back people once trouble reports have been issued, this has become a difficult task. You may not get a call-back when phone problems have been corrected if it is apparent that you would know that the correction has been made. When corrections are of a nature that they require contact with the user, however, telecommunications will try to contact the person reporting the trouble.

Many inquiries involving the processing of long distance calls were handled; several errors were found to be causing these problems and have been corrected. Problems with calls to Canada and Puerto Rico have been resolved, as have problems calling neighboring towns.

A minor problem with long distance call queueing has been discovered with restricted calling zones (known as FRLs) of 5 or less. When all circuits are busy and your call goes into queue, you will hear the recall dial tone (three beeps followed by dial tone) for approximately ten seconds. At the end of this period, dial tone will drop away but you will still be in queue. You should hold on and your call will be processed sometime within the next 50 seconds. If at the end of the 50 seconds you hear an error tone, it means that no facilities are available for your call and you should try again at a later time.

Unfortunately, this same recall dial tone also signifies that authorization codes are required on restricted telephones. It is difficult to differentiate the meaning of the tone. If you are using a restricted telephone, however, you will get an error tone at the end of the dial tone if an authorization code was expected. In the next few days, changes will be made so that people with FRL-6 will hear



these tones. (Queueing was inadvertently omitted from this calling level.) Once again hearing the recall dial tone at the end of your dialing does not normally mean the system is requesting an authorization code, but rather that it has put you into queue.

People who need authorization codes on account codes on the new system should submit those requests in writing, and they will be processed as soon as possible. Requests for authorization codes, account codes, and FRL changes should be submitted by the department telecom coordinator rather than by individuals. Although credit cards have been distributed, we are still awaiting the international credit cards with the special numbers required for international dialing. Their delivery is anticipated sometime within the next 30 days.

Removal of all the rented Centrex telephones from offices will begin soon. Please be sure that you disconnect any special equipment attached to these phones so it is not inadvertently removed.

If you have orders for changes in hardware or software, please hold these for a few more weeks until you are notified that the department is prepared to handle them.

Needless to say, the last two weeks have been a difficult time for the Department of Telecommunications, AT&T, and you. The department has tried to provide the campus with the best possible service during cutover and realizes that some people had lapses of service during the transition. The entire project team has worked diligently to rectify problems in the shortest possible time period. Your patience and cooperation during the transition are appreciated.

Pat Paul is director of Telecommunications. This is another in a series of articles describing the telephone equipment switchover.

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Reagan's Aid Proposals Could Be Dangerous Trial Balloons, Murphy Says

President Reagan's proposals to cut federal financial aid for students "will have a drastic impact on higher education" if they are adopted, according to Susan H. Murphy, dean of admissions and financial aid at Cornell.

Proposed changes in the Guaranteed Student Loan and College Work Study programs and the elimination of two other federal programs could "change the complexion of higher education" by limiting the opportunities for low- and middle-income students, she says.

"While I recognize that these are simply proposals and that Congress will have the opportunity to change and redirect, I am increasingly concerned about the impact these trial balloons have on our disadvantaged and minority students," she says.

"As disadvantaged students hear these proposals, they assume that there will not be the support for them to continue their education. As a result, they simply do not apply for admission."

In 1977, 50 percent of black graduating high school students enrolled in college nationwide. In 1982, the most recent year for which figures are available, only 36 percent of graduating blacks enrolled in college, and the figures probably have continued to decrease since then, Murphy says.

During the same period, black enrollment at Cornell increased

During the same period, 120 black freshmen enrolled at Cornell in 1977; in 1982, 162 black freshmen enrolled. In 1985, there were 143 black freshmen at Cornell.

"Although Cornell has increased its number of minority applications over the past several years, we are concerned about the disadvantaged student who is choosing not to enroll," Murphy says.

"We all recognize that higher education must bear its fair share in meeting the serious deficit our nation faces," she adds. "The cuts (in student aid) put forth by President Reagan go far beyond that fair share."

Reagan's proposals would cut \$2 billion

from grants and loans for fiscal 1987 and would drop more than 1 million students from all federal aid by 1987-88, according to the Chronicle of Higher Education.

News reports indicate that Congress is likely to reject many of Reagan's student aid proposals, but that some reduction in federal aid is a certainty.

At Cornell, nearly 50 percent of student financial aid is provided through federal programs.

The Guaranteed Student Loan Program provides support for one-half of Cornell's undergraduates and about 60 percent of graduate and professional students.

Changes proposed by Reagan, including reducing the subsidies to lending institutions, making students pay more of the interest on their loans, and increasing the cost of the loans without extending the payment period, could cause lenders to pull out of the program and would make it more difficult for students to repay their loans, Murphy says.

The proposal to eliminate the Supplemental Educational Opportunity Grant, which provides \$1.4 million to needy Cornell students, would affect more than 1,500 Cornell undergraduates and would cut federal grants to the university by 10 percent.

Elimination of the State Student Incentive Grant would cut federal student aid to New York State by about \$6.5 million.

A proposed 60 percent cut in the College Work Study Program would be "particularly damaging," she adds. More than 4,000 Cornell students earn \$4.5 million annually through work study jobs.

"Secretary of Education William Bennett has said that states and localities, not the federal government, bear a primary responsibility for providing education," Murphy says. "I disagree."

"Education requires a partnership among many groups to support our young people. That partnership includes localities, states, institutions, families, and private donors. To truly work, it must have the federal government as a backbone of support."

Cornell Has Telephone Counsel For Troubled Farmers in State

A special toll-free phone line has been established by Cornell Cooperative Extension for New York farmers seeking assistance in coping with financial problems.

The NY FarmNet number — (800) 547-FARM — is for farmers and their families.

Lucinda A. Noble, director of Cornell Cooperative Extension, and Joseph R. Gerace, commissioner of the New York State Department of Agriculture and Markets, jointly announced the establishment of the phone line, which went into operation March 10.

Operated by Cornell Cooperative Extension, the NY FarmNet line will refer callers to experts in their local areas who can assist them in making critical financial decisions.

The new service is open from 12 noon to 9 p.m., Monday through Saturday. Calls are being answered confidentially by trained personnel in the College of Agriculture and Life Sciences. A back-up answering service will take messages during other times.

In announcing the toll-free phone line, Noble said, "Many New York farmers feel overwhelmed by financial pressures brought about by an unfavorable economic climate. Some aren't sure where to turn for assistance in coping with financial, personal, and family problems resulting from financial stress."

"Our goal," she added, "is to help farmers get the information they need to make sound decisions about their future options."

NY FarmNet provides a centralized network with staff who have knowledge of and access to local and statewide resources and services available to assist farmers, farm workers, and their families.

Commissioner Gerace encouraged farmers and farm workers to call the toll-free number.

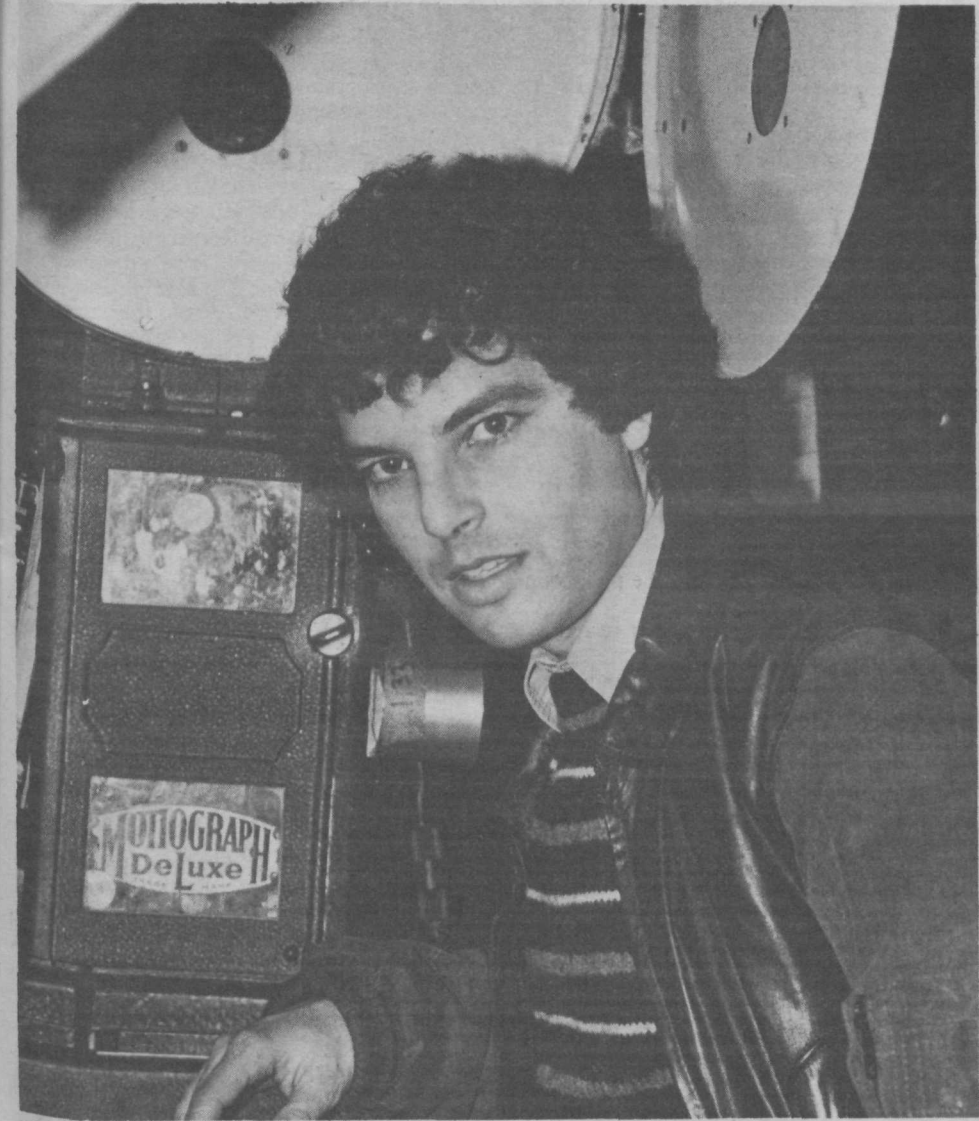
Major Floriculture Conference to Be Here

The university will inaugurate a major national conference this summer to discuss problems and research advances affecting the nation's floriculture industry. To be called "Floriculture 2000: The Role of University," the conference will be held on campus from June 30 to July 2.

Conference chairman Robert W. Langhans, a professor of floriculture in the College of Agriculture and Life Sciences, says the purpose of this "specialized conference"

is to bring together leaders of the floriculture industry and the best academicians in the nation to discuss a wide range of scientific subjects and to exchange ideas about critical problems and issues facing the industry.

The conference will become an annual event to honor John G. Seeley, professor emeritus of floriculture science in the Department of Floriculture and Ornamental Horticulture.



Richard Herskowitz, Cornell Cinema director.

Experimental Films Integral Part Of the Cornell Cinema Operation

By ELAINE MAIN

Commercial theaters usually do not show experimental or alternative films because such movies typically do not bring in much money.

At Cornell Cinema, however, popular films help pay the way for the showing of experimental efforts.

"Our philosophy is that an educational community needs to see diverse films," says Richard Herskowitz, director of Cornell Cinema. "Financially, that is possible when profits from popular commercial films can be used to fund the films that are unique or experimental. The policy assures film offerings that cover a wide variety of interests."

This week, Cornell Cinema is in the midst of three 10-hour showings of "SHOAH," the acclaimed French documentary that examines the Holocaust through interviews with participants and survivors.

Other films featured this month by Cornell Cinema focus on Jean-Luc Godard, Australian cinema, and Marilyn Monroe. Cornell Cinema's offerings put Ithaca in the same experimental film-showing league as New York City, Boston, Chicago, and Los Angeles, Herskowitz claims.

"In my opinion, Cornell has the best and most balanced campus film exhibition program in the country," adds Ron Loomis, director of unions and activities, which jointly sponsors Cornell Cinema along with the Johnson Museum of Art.

His praise comes at a difficult time for cinema, especially experimental cinema.

"Cornell Cinema is one of the survivors," Herskowitz says. "Nothing like it exists across the country. Lately it's been difficult to keep repertory film groups afloat. Many places aren't making it. Grants are hard to obtain. Audiences have lost the interest they had in the 60s and 70s. Video and cable dilute the market."

"We are planning to ask the university for more financial help," he adds.

Still, Cornell Cinema bucks the trend against non-commercial film showings by establishing its place as an educational agency. It brings 30 guest film makers and speakers to campus each year. Its offices now include a film study center, where the viewing of any of its 100 films can be controlled frame-by-frame. It supplies two libraries of video rentals; one in Willard Straight Browsing Library, the other at Entrepot in Noyes Lodge. It publishes calendars, an annual catalog, and other educational materials.

Recently, Cornell Cinema received recognition for its variety of film offerings. An organization with an auspicious acronym, NCaa, cited Cornell for displaying "the most Hollywood vintage movies and world cinema for the edification and titillation of their student bodies and minds." The award came from the National Collegiate aesthetic

association, whose small a's distinguish it from the athletic NCAA.

The award was called the Bogey Award and, while it was created tongue-in-cheek by a University of Ohio professor, it was earned honestly. He scores campuses across the country on their film offerings. Cornell's 63 points were second only to the University of Texas at Austin (74 points).

Herskowitz says that Cornell Cinema shows 600 films a year in Uris, Statler, and Anabel Taylor halls and Johnson Museum, with largest crowds on weekends. So far, "Amadeus" has been the biggest draw for 1985-86, attracting 3,000 people in four showings.

Some weekend films are limited to the Cornell community because of rental agreements mandated by film distributors.

"Non-Cornellians can purchase a Cornell Cinema membership card to attend those showings," he says. Memberships cost \$20 for 10 admissions. Otherwise admission is \$2.50.

"We try hard not to conflict with Ithaca movie theatres," Herskowitz says. "We show Hollywood films several months after commercial theatres. If a foreign film is scheduled by a local theatre, we won't compete."

Cornell Cinema encourages co-sponsors, and that increases the variety of films selected. In the last five years, the number of co-sponsored films has quadrupled to 170. Sometimes, the co-sponsor is an academic department, whose professors assign the film as course work. Sometimes the co-sponsor is a campus organization or service group.

Film selection is the responsibility of the Cinema Advisory Board, which includes 13 student, faculty, staff, and off-campus representatives. Each month they review all suggestions left by patrons at Uris Theatre.

The board gets background on the films and additional suggestions from Herskowitz. He has a master's degree in communication arts from the University of Wisconsin and has studied film at three other universities.

Herskowitz is known in the media arts community. He was quoted extensively in the last issue of "The Independent," the monthly publication of the Foundation for Independent Video and Film. That article urges universities and other agencies to provide more support for cinema programs.

Loomis says that Cornell Cinema's emergence resulted from competition between two major exhibition programs in the 1960s. Cornell's Department of Theatre Arts was showing artistic, foreign, and experimental films but was losing money; \$10,000 in 1969. At the same time, a student service group, Alpha Phi Omega, was profiting from first-run weekend movies. The available halls and the audiences were limited, and competition became a serious problem.

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It's Fair Time! Project Ezra Center Stage March 25

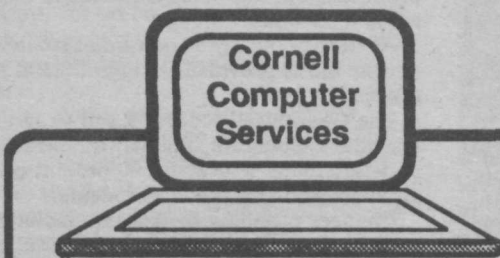
Cornell faculty who have been introducing innovative uses of microcomputers into their teaching will demonstrate some of these uses at the Project Ezra Fair at Statler Hall on March 25.

Funded from a three-year grant to Cornell from the IBM Corporation, Project Ezra seeks to improve the quality and efficiency of instruction and research through computing, according to Cecilia Cowles, Project Ezra director. (Eighteen other universities are also participating in IBM's Advanced Education Projects (AEP).) A sampling of projects from the more than 200

Cornell participants in Project Ezra can be seen at the fair, Cowles said. She also said that it will be the first time that large numbers of Project Ezra participants will be sharing their philosophies and experiences at the same event. Morning and afternoon sessions will open with panel discussions in Room 217. Beginning at 9 a.m. Mark Turnquist, Engineering; Geoffrey Chester, Arts and Sciences; and Norman Scott, Agriculture and Life Sciences, will discuss Project Ezra in their respective colleges. At 1 p.m. Geri Gay, research and development specialist for Computer Services; along with Rich-

ard Leed, Modern Languages and Linguistics; Robert Cooke, Agricultural Engineering, and Dean Sutphin, Education, will take a look at Design Considerations for Computer-based Instruction. Throughout the day there will be a series of 20-minute talks by the participants who have been selected to represent Cornell at the next AEP Conference sponsored by IBM in April. At the same time in the Statler Ballroom approximately 20 demonstrations will be on view concurrently during the day. Following the theme Tools for Learning, more than 40 Project Ezra participants will show visitors

how their programs work. They will also discuss why the computer was used or needed in that subject area. Questions they will be considering include: What was the educational problem to be solved? How did the teacher go about solving it? What were the results? What would be done differently next time? And how has the computer changed the way this academic discipline is taught and learned? All sessions are open to the Cornell community. Programs are available from Carrie Regenstein, conference coordinator, in G44 Uris Hall, 255-8967.



THE COMPUTER PAGE

An Occasional Collection of News and Comments from Computer Services

Terminal Facility Open to Public In Pleasant Grove

Computer Services has opened its first public facility in family housing. Eight VT 100 terminals and a highspeed printer have been installed in Apartment 8 at Pleasant Grove Apartments and will be open to residents of that housing complex at any time. Other additions include the placement of eight more Macintosh microcomputers and an AppleLaser printer at Upson Hall, bringing the total there to 32 plus two printers.

These microcomputers can be used in pairs for CS 314 or individually, according to James Manning, manager of terminal operations for CCS. The Upson Hall facility, along with the terminal rooms in Carpenter, Martha Van Rensselaer and Warren Halls are open from 7:30 a.m. to 4 a.m. weekdays and 8 a.m. to midnight on weekends during the academic year. Computer Services has also placed two IBM-PCs, two IBM/XTs, and two Hewlett-Packard microcomputers in a public facility in McGraw Hall. More equipment will be added when renovations are completed, Manning said.

Upcoming Meetings For Micro Users

Apple Macintosh/Lisa (MUGWUMP)—April 1, May 6, Ives 120, 3:30 p.m.

Commodore—March 17, April 7 and 21, May 5, G94 Uris, 7-9 p.m.

Mac Developers—April 1, May 6, 214 Ives, 3:30 p.m.

PC Developers—April 2, May 7, 202 Ives, 2:30 p.m.

PC Users—March 21, April 25, May 16, 100 Caldwell, 1:30-3 p.m.

SIGNUM (new Macintosh users)—April 29, 120 Ives, 3:30 p.m.

user.user (users of office systems)—G25 Stimson, March 20, 12:20-1:10 p.m.



Deborah McGraw (Modern Languages and Linguistics) who has introduced the computer as a classroom tool in undergraduate German courses, will be speaking at the Project Ezra Fair on March 25.

New Series of Workshops Scheduled to Begin March 31

A new series of workshops sponsored by Cornell Computer Services will begin March 31, after spring break. All of the popular courses offered during the first half of the semester will be repeated and 10 more will be added, according to Irving Wiswall, workshop coordinator. An Introduction to Macintosh, Desk Top Publishing, and Issues in Selecting a Data Base Language will be taught for the first time. Other additions include: A Survey of Software Available for the Apple Macintosh, An Introduction to Macintosh Development, Advanced Lotus Techniques, Assembly Language and the IBM-PC BIOS, An Introduction to UNIX,

Advanced Techniques Using SAS, and An Introduction to SAS/GRAPH.

On the basis of previous experience, Wiswall advises interested persons to register early for the workshops to avoid disappointment. Workshops dealing with microcomputers, particularly word processing and spreadsheets, have 'sold out' early, he said. The workshop schedule and registration form will be available before spring break at all staffed public terminal sites. Persons wishing to have these forms and schedules sent to them should contact Jan Jesmer, G08 Uris Hall, 255-9980.

Varied Topics Highlight Upcoming Seminars

Environmental design, tree rings, music, and Greek are a sampling of the areas that will be covered in the Lunchtime Bytes seminars sponsored by Academic Computing during the rest of the semester. The seminars meet weekly from 12:20 to 1:10 p.m. in 100 Caldwell Hall. Topics and speakers include: March 20—Data Base Packages for the IBM-PC and the Apple Macintosh; Linda Iroff, Arts and Sciences, and Donna Tatro, CCS. April 3—Use of Interactive Videodisc Technology in Higher Education; Geri Gay, CCS. April 10—Using the Apple Macintosh for Environmental Design; Sheila Danko, Design and Environmental Analysis. April 17—Aegean Dendrochronology Data Bank; Peter Kuniholm, Classics. April 24—A Musical Review; David Borden, Dance, and Don Randel, Music. May 1—The Concept System; William Trochim, Human Service Studies. May 8—Foreign Language Word Processing; Kevin Clinton, Classics, Linda Richmond, CCS.

plus the speller feature, printing, and merging documents using the WordPerfect software package. All of the keystrokes needed to work through the tutorials are listed step by step in the course book. The package serves as an excellent learning and reference tool and has been used with great success in WordPerfect workshops taught by CCS.

Donna Tatro, User Support

WordPerfect 4.1 Tutorials Available

The Computerware Department at the Campus Store is now selling the WordPerfect Basics Tutorial (version 4.1). The package includes a WordPerfect 4.1 Tutorial book and a diskette containing the tutorial work files. To use the materials you need an IBM-PC, PC/XT, PC/AT or PC-compatible computer; a DOS (Version 2.0 or higher); and the WordPerfect Version 4.1 system and speller disks. The tutorials cover the basic skills needed to create and edit documents

VendaCard Conversion Set March 17

In an effort to provide enhanced support for microcomputer laser printers in CCS public facilities, the existing VendaCard system will be converted effective March 17. As part of the conversion, CCS will install VendaCard dispensers in the B7 Upson, G26 Uris, and 1 Warren facilities. Cards purchased from these devices will be valued at \$5 and will work from any of the HP LaserJets, Apple LaserWriters, and copiers that are available in CCS public facilities. (Locations are listed below.)

Commensurate with the conversion March 17, cards purchased from any other location will not operate CCS laser printers or copiers. Previously, patrons purchased cards in the Mann Library or Catherwood Library. The new system affords users at our most frequently used facilities the convenience of on-site accessibility to VendaCards. Dispensers are expected to be installed later in other CCS sites as well. CCS laser printers will continue to cost 15 cents per page. Users who have purchased a CCS VendaCard will be able to add money to their cards in \$1, \$5, \$10, or \$20 increments. Departments can use a university account number to purchase cards (minimum \$25); please contact Linda Hoose at 255-8304 or 8310 for details.

CCS provides microcomputer laser printing from the following locations:

B7 Upson 2 Apple LaserWriters
G83 MVR 1 Apple LaserWriter
1 Warren 1 Apple LaserWriter, 1 HP LaserJet
B21 McGraw 1 HP LaserJet, 1 Apple LaserWriter

G26 Uris 1 HP LaserJet
B108 Sibley 1 HP LaserJet

In addition, G26 Uris contains a copier that can be operated by coin or VendaCard for \$.05 per page. We hope that these changes will afford greater convenience for our user community. If you have any questions about our microcomputer laser printing services, please call Agelia Velleman at 255-4981.

Conference to Have 9 Cornell Projects Among Presentations

Nine Cornell projects have been selected for presentation at the Advanced Education Projects (AEP) Conference, sponsored by the IBM Corp. April 5-8 in San Diego.

This meeting will include the 19 universities participating in the IBM grant program that includes Cornell's Project Ezra. Faculty members are supported and encouraged to create innovative software for educational purposes.

Project Ezra participants and their presentations and demonstrations are: — Martin Gardy and William Hagamen, Cornell Medical College, "MEDCAT/CATS." — Daniel J. Loucks, Environmental Engineering, "Interactive Environmental Modeling and Graphical Display of Spatial and Temporal Data." — Arch Mackenzie, Architecture, "A Language Lab for Architectural Design." — Deborah McGraw and Slava Paperno, Modern Languages and Linguistics, "An Authoring System As A Tool For Foreign Language Learning."

— Karl J. Niklas, Plant Biology, "Computer Models of Plant Morphology and Evolution."

— James S. Noblitt, Modern Languages and Linguistics, "Bilingual Word Processing."

— W. L. Olbricht, Chemical Engineering, "Computer Graphics Flow Visualization For Undergraduate Instruction."

— David I. Owen, Near Eastern Studies, "A Sumerian Dictionary Of The Third Millennium B.C." — Anthony P. Reeves, Electrical Engineering, "An Instructional Facility For Computer Vision And Image Processing."

Financial Aid: Many Parents Missing Bets

By JEANNE MACKIN

Many parents often find themselves in a real bind when planning for their child's academic future. They want to give their children the advantage of a college education but face rising costs of that education.

"Today and in the future, the 'ticket to success' is likely to be a college education or at least some post-secondary training," says Jeanne M. Hogarth, a consumer economist with Cornell Cooperative Extension.

"Over their lifetimes, college graduates earn about 50 percent more than high school graduates," she explained. "With more and more college graduates competing for well paying jobs, people without higher education will fall farther behind economically." However — and this is a major factor — tuition and fees for post-secondary education have risen faster than inflation, and this trend, according to many forecasters, will continue.

"Paying for a post-secondary education is not easy," Hogarth said. To make it easier, she recommends that all families apply for financial aid.

"As a rule of thumb you should always apply for financial aid. Never assume you are not eligible," said Hogarth, who is in the College of Human Ecology.

On average, financial aid, including grants, scholarships, and loans, accounts for 43 percent of the costs of a typical college education. Cash paid by parents (26 percent), student earnings (22 percent), and miscellaneous sources (9 percent) pay the rest of the bill.

Financial aid is usually available on a basis of need, defined as the difference between estimated college costs and the amount that analysis feel parents should be able to pay.

"There is a rule of thumb to determine if you may be eligible for aid," Hogarth said. Take 5 percent of the value of your assets (house, savings, investments) and add it to your adjusted gross income from last year's tax return. Divide this amount by the annual college costs.

"If the number is 6 or less, you may qualify for aid; if the number is more than 6 you may not qualify for as much aid," Hogarth said.

The following are sources of financial aid that parents should investigate to help pay for college for a child:

—Grants and scholarships are direct aid that does not need to be paid back. Pell Grants are awarded to students from families with incomes below \$25,000 although special situations may make families with higher incomes eligible. Supplemental Educational Opportunity Grants (SEOG) and New York State Tuition Assistance Program (TAP) also provide grants.

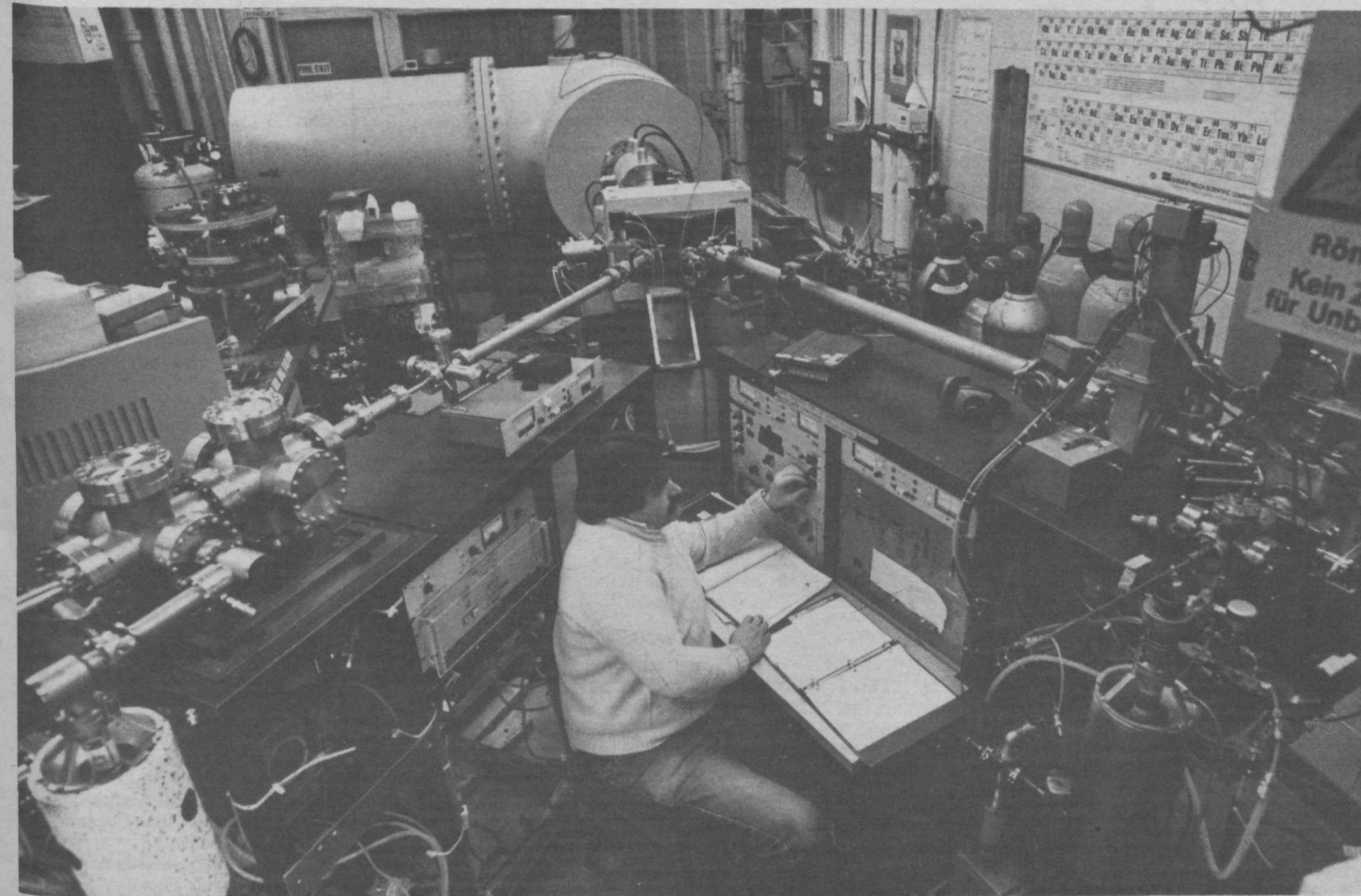
—Loans for students often feature lower and deferred interest rates. Guaranteed Student Loans (GSL); Parent Loans for Undergraduate Students (PLUS); Auxiliary Loans to Assist Students (ALAS); National Direct Student Loans (NDSL); and New York State's Supplemental Higher Education Loan Financing Program (SHELF) are sources to consider. Also check for college- and state-sponsored loans and independent loans that are sometimes available from insurance agencies and private foundations.

—Home equity loans can help raise the needed funds for secondary education. But remember, this type of loan is really a second mortgage based on the equity in your owned home. You need to be careful about making payments; you could face foreclosure, Hogarth cautions.

—College Work Study (CWS) programs provide opportunities for students to study and earn money at the same time. The work may or may not be related to the student's field of study; hours are set by the college or hiring unit. Other specialized work-study situations, especially those in the sciences and technology, may provide work as part of the program of study.

For more detailed information on these and other sources of financial aid, speak with the college's financial aid officer to determine what will be available at the time your child enrolls. High school guidance counselors and reference librarians may provide additional information.

Think twice, though, before paying a "scholarship search firm" for help in locating sources of financial aid, Hogarth suggested. Such firms charge anywhere from \$45 to \$100 for information which may be available free elsewhere.



Without the government's "fair share" of overhead cost recovery, the university says it cannot afford to provide resources for federally sponsored research, such as this Rutherford backscattering facility in Bard Hall.

Research

Continued from Page 1

ment wants, than it would be for universities to assume the rightful obligation of Washington to reimburse us for the government's fair share of the administrative costs we incur in conducting federal research," Barker told the OMB.

Administrative costs at Cornell cover secretarial and accounting services, purchasing, animal care, environmental health, personnel, and sponsored programs administration, as well as contributions to a host of campus-wide services and programs, according to the provost. Many administrative indirect costs are federally mandated.

The OMB policy would limit the amount of administrative overhead costs that universities can recover from all federal agencies to 26 percent of such costs in 1986 and 20 percent after April 1987.

Cornell's current indirect recovery rates for administrative services range from 24 percent in the endowed divisions and 25.2 percent in the Medical College to 37 percent in the state units. Under existing policy, individual universities negotiate their indirect cost recovery rates with the federal government.

Administrative overhead is one of several kinds of indirect costs charged to the government and other sponsors that use university research facilities. Not affected by the proposed federal limit are other overhead costs

such as maintenance of research buildings, utility costs, and operation of research facilities and libraries.

As a fraction of total direct costs, Cornell's indirect costs for departmental and central administration have been nearly constant over the last 10 years, according to Joseph M. Ballantyne, vice president for research and advanced studies.

"Most of these costs are not 'administrative,' since they include departmental secretaries, shop personnel, and computer personnel who directly support research," Ballantyne said. "A federal cutback here would be a major blow to our goal of a more equitable distribution of this resource throughout the university."

"A fundamental change in federal policy is being made absent the intensive discussions and negotiations between universities and government which characterized the establishment of existing ... policies," Barker maintained in his letter to OMB.

"Cornell, like most other universities, recovers less than the full amount of indirect costs and makes only modest recovery of the costs of research facilities used by sponsored programs," the provost commented later.

The OMB rate ceiling is below the level recommended by the White House Office of Science and Technology Policy, Barker observed in the reply to OMB. He said the White House urged that modifications be made "only after full and open discussion with the higher education research community."

Most major research universities share Cornell's view on reimbursement of indirect costs, according to Carol R. Scheman, director of federal relations for health and biomedical research at the Association of American Universities. "Once you start partial funding, it's a slippery slope where you never regain full funding," she said. "You can't buy good research on the cheap."

In Cornell's College of Agriculture and Life Sciences, where \$6.4 million in federally sponsored studies were conducted last year, Director of Research Norman R. Scott called for a delay in implementing the indirect cost ceiling. A professor of agricultural engineering with his own active research program, Scott said, "We need to see if there are ways to reduce administrative expenses at Cornell."

Bernard L. Horecker, associate dean for research and sponsored programs at the Cornell University Medical College, said reducing indirect cost allowances to less than actual costs would result in a "gradual erosion of the college's ability to carry out research on the cure and prevention of disease." Some \$31.3 million in federally sponsored research, mostly from the National Institutes of Health, was conducted at the Medical College in 1985.

In the Division of Biological Sciences, where the federal government funded \$3.2 million in studies last year, Associate Director Harry L. Stinson hopes a reduction in the number of research grants is not necessary and that another solution can be found.

Budget

Continued from Page 1

versity, will be met in 1986-87, she added. "Our costs don't reflect just inflationary trends," Barker said in explaining why some items, including tuition, are increasing more than inflation.

Providing additional computer equipment for teaching and support services, for example, is not an inflation-dependent cost, he said.

In addition, Cornell will be reducing its endowment pay-out rate from more than 6 percent to a "more prudent" 5.5 percent, Barker said. Lowering the pay-out rate will help the long-term growth of the endowment, but requires increases in other revenue sources to make up the difference, he explained.

Other items in the budget proposal include:

— An 8.6 percent increase in Law School tuition, to \$11,760.

— A 9 percent increase in tuition at the Johnson Graduate School of Management, to \$12,100.

— A 7.6 percent increase in tuition for graduate students in statutory units, to \$5,400.

— An approximately 4 percent increase in tuition at the College of Veterinary Medicine, to \$7,700 for New York State residents and \$9,220 for non-residents.

— A 7.1 percent raise for first-year teaching assistants and research assistants, to \$6,000. Second-year graduate assistants will receive a stipend of \$6,150.



Violet Best, a laboratory technician in Cornell's Department of Plant Breeding and Biometry, shows plants being grown in tissue culture to Joseph R. Gerace, New York State Commissioner of Agriculture and Markets, during his visit to campus last week. Gerace was at Cornell to announce nine new agricultural research projects in the College of Agriculture and Life Sciences.

Calendar

All items for publication in the Calendar sections, except for Seminar notices, must be submitted (typewritten, double spaced) by mail or in person to Fran Appar, Central Reservations, 531 Willard Straight Hall at least 10 days prior to publication. Seminar notices should go to the Chronicle office, 110 Day Hall. Items should include the name and telephone number of a person who can be called if there are questions, and also the subheading of the calendar in which it should appear (lectures, colloquia, etc.) ALL DEADLINES WILL BE STRICTLY ENFORCED.
*—Admission charged.

Announcements

Personal Development Program

Creating the Possible: a one-day personal development program with LetDavidson, Ph.D., on defining life purpose, accomplishing your goals and going beyond previous limits. Meets Sat., Mar. 22, 9:30-6:30. Call 272-4131 for information and registration.

Alcoholics Anonymous

Faced with a drinking problem? Perhaps Alcoholics Anonymous can help. Open AA meeting—Monday through Thursday 12 noon in Anabel Taylor Hall. Mon., Tues., Thurs.—Forum; Wed.—Room 314.

Emotions Anonymous

Every Tuesday, 109 Oak Avenue, (the Lutheran Church), college town. Emotions Anonymous is a self-help group for people with living or emotional problems. Everyone is welcome.

Writing Workshop

Writing Workshop Walk-in Service. Free tutorial instruction in writing. Mon.—Thurs., 3:30-6 & 7:30-10 p.m.; Sun. 3-8 p.m. 174 Rockefeller Hall and Sun.—Thurs. 10 p.m.—midnight in 340 Goldwin Smith Hall.

Archaeology Field Scholarships

Hirsch travel scholarships will be granted to archaeology students for field training this summer. About 10 students, participating in properly supervised archaeological field schools and research projects in the United States and abroad, will receive grants toward travel costs. Undergraduates majoring or concentrating in archaeology will be preferred candidates, but others with a proven interest in archaeology may apply. For details and application forms, see members of the Archaeology faculty or Bev. Phillips, 265 McGraw Hall. Fliers, advertising many field training programs in addition to those sponsored by Cornell, are on file in the archaeology office, along with evaluative reports by former participants. The deadline for applications is April 18.

Intramural Box Lacrosse (Men, Women)

Deadline for entries is Thursday, March 13 by 4:00 p.m. in the Intramural Office in Helen Newman Hall. Minimum of 10 to enter...Team consists of 6 players...Players must supply their own sticks...Play starts (around) Monday, April 7 in Lynah Rink...Please specify your preferred day of play when entering (1st, 2nd, 3rd choice)...Monday through Thursday...Friday only if necessary...each team will play one Sunday—to be decided by the Intramural Office).

An entry fee of \$30 is due with your roster to enter. Checks only please, made payable to "Dept. of P.E. & Ath., Intra. Div."

Intramural Horseshoes (Men, Women, Co-Ed)

Deadline for entries is Monday, Mar. 17 by 4:00 p.m. in the Intramural Office in Helen Newman Hall. Minimum of 2 to enter...straight elimination tournament...play starts Monday, Apr. 7 or Monday, Apr. 14 at Jessup Field.

An entry fee of \$2 is due with your roster to enter. Checks only please, made payable to "Dept. of P.E. & Ath., Intra. Div."

International Food Bazaar

Come in out of the cold, and experience a melange of food and culture on Thursday, March 13, 11 a.m.-2 p.m. in the Willard Straight Hall Memorial. Sponsored by the Willard Straight Hall Program Board.

Second Annual Oratory Contest

Everyone is welcome to participate in this event on Saturday, March 15, 8 p.m. in the Noyes Center third floor lounge. Come show your talent. Co-sponsored by the Noyes Center Program Board and the Martin Luther King, Jr. Scholarship Fund Board of Directors. For more information, contact Debra Turner at 255-8273.

St. Patrick's Day Spree

Steve Geffner will perform in the Alfalfa Room on Monday, March 17 at 8 p.m. Geffner is a guitarist and vocalist. Free. Sponsored by the Willard Straight Hall Program Board.

Willard Straight Hall Office Space

Applications for Willard Straight Hall office space are due on Monday, March 21 in 401 Willard Straight Hall by 5 p.m.

Greenhouses Tour

Members of the Campus Club of Cornell—tour Cornell Greenhouses with Barbara Stewart, Research Technician of the Department of Floriculture & Ornamental Horticulture, Thurs., Mar. 13, 10:30-11:30 a.m. Meet in the Kenneth Post Lab Building on Tower Road. Free.

Personal Development Program

Creating the Possible: a one-day personal development program with Let Davidson, Ph.D., on defining life purpose, accomplishing your goals and going beyond previous limits. Meets Sat., Mar. 22, 9:30-6:30. Call 272-4131 for information and registration.

Colloquia Dance Cornell Folkdancers

The Cornell Folkdancers will meet in the North

Room of Willard Straight Hall on Sunday, March 16. Instruction from 7:30-8:30 p.m., followed by request dancing until 10:30 p.m. Free; beginners welcome; no partner necessary. For more information call 255-7149 or 257-3156.

Cornell Dance Series

The Cornell Dance Series Spring Performance will feature the Lucinda Childs Dance Company on Friday, Apr. 11 at 8 p.m. in the Statler Auditorium. For tickets and information contact the Dance Office, Helen Newman Hall, 255-2360. The 1985-86 Cornell Dance Series is made possible by the College of Arts and Sciences and Council of the Creative and Performing Arts.

Dance

Cornell Jitterbug Club

The Cornell Jitterbug Club meets every Wednesday, 7:30-9:30 p.m. in Anabel Taylor Edwards Room. Instruction given.

Israeli Folk Dancing

Dancing will be held on Thursday evenings at 8 p.m. in the One World Room of Anabel Taylor Hall. Beginners and experienced dancers welcome.

Jazz Exercise

Adult Jazz Exercise Dance Class. Tuesdays and/or Thursdays, 7-8 p.m. Call 255-4231 mornings or 257-5677 for further information.

Cornell Folkdancers

The Cornell Folkdancers will meet in the North Room of Willard Straight Hall on Sunday, March 9 and 16. Instruction from 7:30-8:30 p.m., followed by request dancing until 10:30 p.m. Free; beginners welcome; no partner necessary. For more information call 255-7149 or 157-3156.

Exhibits

Herbert F. Johnson Museum

"New York State Artists V" through Mar. 16; "Hans Hinterreiter" through Mar. 23; "Speiser Collection II: Breaking the Plane" through Mar. 23. The Museum is located on the corner of University and Central Avenue. Museum is open Tuesday through Sunday, 10 a.m.-5 p.m. Admission is free. Please call 255-6464 for further information.

Thursday

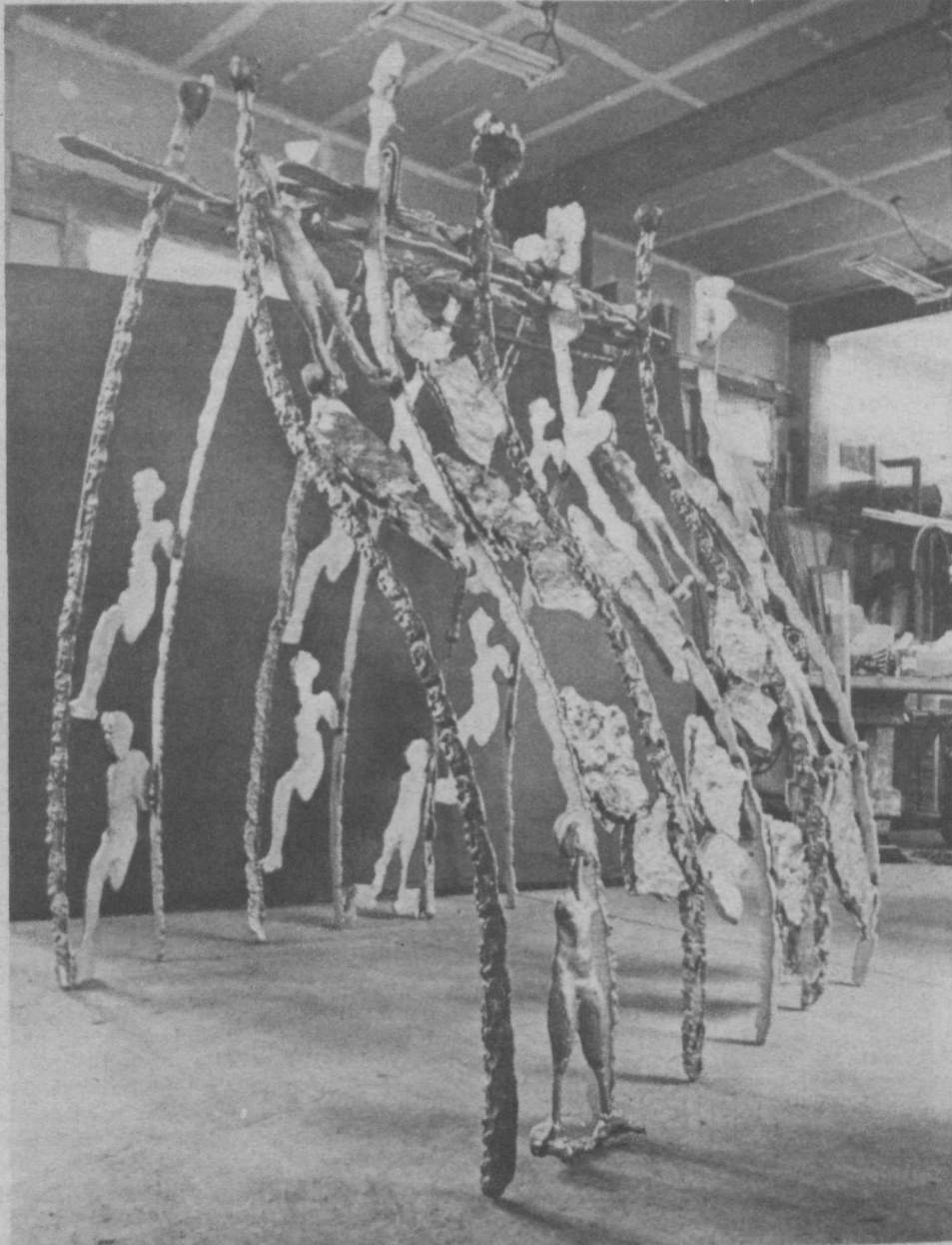
Mar. 13, 5 p.m. Willard Straight Hall Art Room. Works by Itisham Kabir on "Bangladesh Dreams and Reality." Everyone is welcome. Sponsored by the Willard Straight Hall Program Board.

Thursday

Mar. 17, 7 p.m. Willard Straight Hall Art Room. Works by Marsha Polenberg on "Faces in the Whirlwind." Everyone is welcome. Sponsored by the Willard Straight Hall Program Board.

Monday

Mar. 31, 5 p.m. Willard Straight Hall Art Room. Works by Andy Leneghan. Everyone is welcome. Sponsored by the Willard Straight Hall Program Board.



"Cut Through—Cut Up" by John von Bergen is one of the works in the exhibition New York State Artists Series V, which will end its run this weekend at the Herbert F. Johnson Museum of Art.

Films

Unless otherwise noted films are sponsored by Cornell Cinema.

Thursday

Mar. 13, 4 p.m. 310 Uris Library. "The Jewel in the Crown, Part 7: Daughter of the Regiment." Sponsored by the South Asia Program.

Mar. 13, 8 p.m. *Uris Hall Auditorium. "Beyond the Walls" (1958), directed by Uri Barbash with Aron Zadak and Muhamad Bakri. Co-sponsored with Ithaca Friends of Israel.

Friday

Mar. 14, 8 p.m. *Anabel Taylor. "Tosca's Kiss" (1985), directed by Daniel Schmid with Sara Scuderi.

Mar. 14, 9:30 p.m. *Uris Hall Auditorium. "Mask" (1985), directed by Peter Bogdanovich with Cher.

Mar. 14, midnight. *Uris Hall Auditorium. "The Day the Earth Stood Still" (1951), directed by Robert Wise with Michael Rennie and Patricia Neal.

Saturday

Mar. 15, 7 p.m. *Statler Auditorium. "Shoah," Part 1. Holocaust documentary series.

Mar. 15, 8 p.m. *Uris Hall Auditorium. "Sugarbaby" (1984), directed by Perry Adlon with Marianne Sagerbrecht and Elsi Gulp.

Mar. 15, 10 p.m. *Uris Hall Auditorium. "Mask."

Sunday

Mar. 16, 1 p.m. *Statler Auditorium. "Shoah," Part 2.

Mar. 16, 2 p.m. Johnson Museum Lecture Room. Guest filmmaker Larry Gottheim presents "Four Shadows" and "Harmonica."

Mar. 16, 2 p.m. *Uris Hall Auditorium. "Mary Poppins" (1964), directed by Robert Stevenson with Julie Andrews and Dick VanDyke.

Mar. 16, 8 p.m. *Uris Hall Auditorium. "The Seven Year Itch" (1955), directed by Billy Wilder with Marilyn Monroe and Tom Ewell.

Monday

Mar. 17, 4 p.m. 310 Uris Library. "The Delhi Way." South Asia Film Series. Sponsored by the South Asia Program.

Mar. 17, 9 p.m. *Uris Hall Auditorium. "Silver City" (1984), directed by Sophia Turkiewicz and screenplay by Thomas Keneally.

Tuesday

Mar. 18, 4:30 p.m. Uris Library Media Center, Room 310. "Bali: Mask of Rangda"; "Sacred Trances in Bali and Java." Shows Balinese ceremonies involving trance states. Sponsored by the Southeast Asia Program.

Mar. 18, 8 p.m. *Uris Hall Auditorium. "Les Carabiniers" (1968), directed by Jean Luc Godard with Marino Mase.

Wednesday

Mar. 19, 4:30 p.m. Uris Hall Auditorium. "Harp of Burma" (1956), Kon Ichikawa. Sponsored by the China-Japan Program. Co-sponsored by Cornell Cinema and the Society for the Humanities.

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Mar. 19, 8 p.m. *Uris Hall Auditorium. "The Revolt of Job" (1984), directed by Imre Kaba with Ferenc Zenthe. Co-sponsored by Hillel.

Thursday

Mar. 20, 4 p.m. 310 Uris Library. "The Jewel in the Crown, Part 8: The Day of the Scorpion." South Asia Video Series. Sponsored by the South Asia Program.

Friday

Mar. 21, 7:30 p.m. *Uris Hall Auditorium. "Private Function" (1984), directed by Malcolm Mowbray with Maggie Smith and Michael Palin.

Mar. 21, 9:45 p.m. *Uris Hall Auditorium. "Fellini Sayricon" (1970), directed by Federico Fellini with Martin Potter and Hiram Keller.

Saturday

Mar. 22, 7:30 p.m. *Uris Hall Auditorium. "Fellini Sayricon."

Mar. 22, 10:15 p.m. *Uris Hall Auditorium. "Private Function."

Sunday

Mar. 23, 2 p.m. Johnson Museum Lecture Room. Composer Eric Ross and Video Artist Mary Ross present "A Multi-Media Performance."

Mar. 23, 8 p.m. *Uris Hall Auditorium. "B Stop" (1956), directed by Joshua Logan with Marilyn Monroe and Don Murray.

Mar. 23, 2 p.m. *Uris Hall Auditorium. "Wonka and the Chocolate Factory" (1971), directed by Mel Stewart with Gene Wilder and John Albertson.

Lectures

Thursday

Mar. 13, 12:20 p.m. 102 West Ave. Ext. "Indonesian Literature in the 1950's," Hendrik M. J. Maier, Visiting Assistant Professor of Southeast Asian Studies and Comparative Literature. Sponsored by the Southeast Asia Program.

Mar. 13, 3 p.m. 701 Clark Hall. Continuing seminar series, The Farm Crisis and the Future of the Family Farm, "Surviving the Farm Crisis: How Farm Households Adapt to Financial Stress," Dr. Carolyn Sachs, Assistant Professor of Rural Sociology, Department of Agricultural Economics and Rural Sociology, Pennsylvania State University. Funded by the W.K. Kellogg Foundation and co-sponsored by Biology & Society, Science, Technology and Society Program and the Rural Sociology Department.

Mar. 13, 4 p.m. 374 Rockefeller Hall. "The Ethics of Midrash Aggadah: Some Features of Classical Rabbinic Biblical Exegesis," Professor Michael Fishbane. Sponsored by the Department of Near Eastern Studies.

Mar. 13, 4:30 p.m. 165 McGraw Hall. "Women & Prime Time Television: The Case of Cagney & Lacey," Julie D'Acci, Lecturer, Communication Arts, University of Wisconsin, Madison. Sponsored by the Women's Studies Program and the Women's Center.

Mar. 13, 4:30 p.m. 366 McGraw Hall. "The State as the Empire with Reference to the Mayan States," Romila Thapar, Andrew Dickson White Professor-at-Large. Sponsored by the South Asia Program.

Friday

Mar. 14, 12:15 p.m. Africana Studies and Research Center, Hoyt Fuller Room. Brown Bag Lunch. "Western Influences on Japanese Views of People of African Descent," Michael Thornton, Human Development and Family Studies. Sponsored by the Africana Studies and Research Center.

Mar. 14, 1-8:30 p.m. 104 Uris Library. Conference, "The Gypsies: Their Language and Culture," with Susan DiGiacomo, Anthropology; I.F. Hancock, Linguistics, University of Texas at Austin; Gordon Messing, Linguistics; Matt Sal, editor of Gypsy Lore; Antia Volland, Anthropology, Wagner College. Co-sponsored by the University Lectures Committee, the Society for the Humanities, the Dept. of Modern Languages & Linguistics, and the James Norris Oliphant Fellowship.

Mar. 14, 3 p.m. 374 Rockefeller Hall. Dead Sea Scrolls Lecture Series, Jonas Greenfield, Hebrew University, Israel. Continued Mar. 17, noon, 374 Rockefeller Hall; Mar. 18, 4 p.m. 374 Rockefeller Hall; Mar. 19, 4 p.m. 307 Rockefeller Hall. Tuesday

Monday

Mar. 17, 4:30 p.m. 230 Rockefeller Hall. "Archaeology of the Biblical Cult," William Dever, University of Arizona. Sponsored by the Department of Near Eastern Studies.

Tuesday

Mar. 18, 4:30 p.m. "The Female Malady: Psychiatry in 19th and 20th Century England," Elaine Showalter, English, Princeton University. Sponsored by the Western Societies Program. For more information call 255-7592.

Mar. 18, 4:30 p.m. 156 Goldwin Smith. "Does Socrates Cheat?," Gregory Vlastos, University of California, Berkeley, Classics Spring 1986 Townsend Lecturer. Sponsored by the Department of Classics.

Wednesday

Mar. 19, 4:30 p.m. "The Early Roman Trade with India," Romila Thapar, Andrew Dickson White Professor-at-Large. Sponsored by the South Asia Program. For more information call 255-4367.

Mar. 19, 4:30 p.m. 205 Thurston Hall. "The Mal Waves Imaging for Materials Characterization," Jane MacLachlan, Graduate Student, Dept. of Materials Science Engineering, Johns Hopkins University. Coffee and donuts served at

p.m. in the Faculty Lounge. For more information call C-Y Hui at 255-3718. Sponsored by the Dept. of Theoretical and Applied Mechanics, College of Engineering.

Mar. 19, 4:35 p.m. 165 McGraw Hall. "Moral Pioneers: Women, Men & Fetuses on a Frontier of Reproductive Technology," Rayna Rapp, Associate Professor and Chair, Anthropology, New School for Social Research. Co-sponsored by the Women's Studies Program and the Program in the History & Philosophy of Science and Technology.

Thursday

Mar. 20, 4 p.m. 213 Ives Hall. "Building International Professionalism, A Lifelong Process," James Stocker, President, GT Management. Sponsored by Comparative Studies in Professionalism and Professional Education and the Center for International Studies.

Mar. 20, 7:30 p.m. G-1 Stimson. "The Bird Populations of Mono Lake, California: What is their Future?" Dr. David Winkler. Sponsored by Jordani. Funded in part by the Student Finance Commission.

Friday

Mar. 21, 12 p.m. 250 Caldwell. Lecture IV of a six-lecture series on historic and contemporary issues affecting the American Indian, "Is the Indian Press Legitimate?" Jose Barreiro, Editor, "Indian Studies." A contemporary view and discussion of Indian literature. Sponsored by the Outreach Component of the American Indian Program.

Music

Portland String Quartet Here Tonight

Leading interpreters of modern American music will visit Cornell today through Sunday to take part in the university's 18th annual Festival of Contemporary Music. Three concerts will be presented in Barnes Hall, beginning today and continuing Saturday, March 15, and Sunday, March 16.

All three, open to the public without charge, begin at 8:15 p.m. They are made possible in part by the Cornell Council of the Creative and Performing Arts, Meet the Composer program, by a gift from alumnus Sidney T. Cox, and the Music Department.

Today's concert features the Portland String Quartet with violinists Stephen Kecskemethy and Ronald Lantz, violist Julia Adams and cellist Paul Ross. The artists will perform the first string quartets composed respectively by each composer. The "Quartet No. 1" by Charles Ives, the secret father of American music, bears the nickname "The Revival Meeting" because of its use of religious tunes and folk melodies. Walter Piston's first quartet was composed in 1933, while Karel Husa's was commissioned and first played by the Smetana Quartet in Prague in 1948. It brought Husa to international fame through its success at the International Society for Contemporary Music at Brussels in 1950. The remaining "Three Pieces" by Igor Stravinsky, Dance, Excentrique, Cantique (together with a concertino) are the only music for string quartet Stravinsky ever wrote.

The quartet makes its home in Maine where it conducts the celebrated International String Quartet Workshop at Sugarloaf each summer. It has concertized and conducted residencies and workshops throughout North and South America and Europe since its inception in 1969. Many of these international tours have been at the request of the United Nations and the State Department, making it one of this country's leading cultural ambassadors. This young ensemble won the Washington Post's award for the best serious music recording in 1983 with its release of the five Bloch quartets.

Contemporary music will again hold the spotlight this Saturday in Barnes with the performance of the piano duo Nurit Tilles and Edmund Nieman of music by Ithacan David Borden and others. Borden's pieces include "The Continuing Story of Counterpoint, part 2, and part eleven, composed in 1982 and 1985-6 respectively; and "Little Ruins", solo version, and with optional second part, both from 1984. Frederic Rzewski's "A Machine" and Steve Reich's "Piano Phase" are played before and after the intermission.

Borden came to Ithaca in 1966 as Ford Foundation Composer-in-Residence. Since 1968, he has served as composer/pianist for dance at Cornell. In 1968, with the support of Robert Moog, he formed the Mother Mallard's Portable Masterpiece Co., the world's first synthesizer ensemble. Borden's approach to music is contrapuntal. He feels that he has been influenced by Buckminster Fuller's architectural design, incorporating the principle of synergy by which each part is equally important.

Composer to Conduct His Own Premiere

American composer Jack Gallagher will appear as guest conductor in the world premiere of one of his own works when the Cornell Wind Ensemble performs at 4 p.m. Sunday, March 16, in Bailey Hall. The concert is open to the public and free of charge.

Gallagher will conduct the first performance of his piece "Diversions," commissioned by and gratefully dedicated to Marice Stith and the Cornell Wind Ensemble. "Diversions" was completed in December 1985 and conceived as an entertainment with boisterous beginning and end. The concert starts out with "Suite Francaise" by Darius Milhaud and "Austrian Variant Suite" by Jim Curnow, which will be conducted by Stith.

The following piece "Troika" from "Lieutenant Kije" by Sergey Prokofiev is the one piece to



The Portland String Quartet performs today as part of the 18th annual Festival of Contemporary Music.

be led by William Bradbury, the assistant conductor of the ensemble.

The final works "Symphony No. 3 for Band" by Vittorio Giannini and "Variations on a Hymn by Louis Bourgeois" by Claude T. Smith are again under the baton of Stith, conductor and director of Cornell Bands and associate professor of music.

Gallagher studied composition with Elie Siegelmeister at Hofstra University and with Robert Palmer and Burril Phillips at Cornell. He has a number of works published or recorded and has been awarded grants and fellowships for composition from 10 different music arts centers, corporations and colleges. He lives in Ohio, where he is presently associate professor of music at the College of Wooster.

Thursday

Mar. 13, 3:30 p.m. Barnes Hall. Don Franklin (University of Pittsburgh) talks about "Temporal Proportion in the Works of J.S. Bach." Sponsored by the Department of Music.

Mar. 13, 8:15 p.m. Barnes Hall. 18th Contemporary Festival, Portland String Quartet. Works of Ives, Stravinsky, Piston, and Husa. Sponsored by the Department of Music.

Mar. 13, 8:30 p.m. Willard Straight Hall Memorial Room. Coffeehouse. A unique blend of talent featuring the vocalist/piano duo of Donna Van Voolen and Nana Gyamfi. At 9:30, Joe Arroyo will be on hand for a comedy routine. Free. Everyone welcome. Sponsored by the Willard Straight Hall Program Board.

Friday

Mar. 14, 8 p.m. Willard Straight Hall Memorial Room. The folk group Maggie will perform. Sponsored by the Willard Straight Hall Program Board.

Saturday

Mar. 15, 8:15 p.m. Barnes Hall. 18th Contemporary Festival, E. Nieman and N. Tilles, pianists. Music by David Borden. Sponsored by the Department of Music and the Council of the Creative and Performing Arts.

Mar. 15, 8:30 p.m. Goldwin Smith Kaufmann Auditorium. Robin and Linda Williams, a duo who perform original and traditional acoustic country music. The Williams' repertoire encompasses old-time country and gospel music, blues, bluegrass, and rockabilly. They are perhaps best known for their occasional performances on "A Prairie Home Companion," the live radio show broadcast on the American Public Radio Network. Advance tickets available at the Commons Coffeehouse in Anabel Taylor Hall, Ithaca Guitar Works, and Borealis Books. Sponsored by the Cornell Folk Song Club.

Sunday

Mar. 16, 4 p.m. Bailey Hall. Cornell Wind Ensemble, directed by Marice Stith; guest conductor Jack Gallagher. World premiere by Jack Gallagher. Works by Giannini, Prokofiev, Milhaud, Benson, Ives, Bourgeois/Smith. Sponsored by the Department of Music.

Mar. 16, 8 p.m. Anabel Taylor Commons Coffeehouse. Bound for Glory, fine harmonies by Maggie from Washington, D.C. Broadcast live on WVBR-FM93.

Mar. 16, 8:15 p.m. Barnes Hall. 18th Contemporary Festival, Pavel Prantl, violin; Martina Maixnerova, piano. Works by Prokofiev, Bartok, Martinu, Hanus, Fiser, and Cernik. Sponsored by the Department of Music.

Wednesday

Mar. 19, 8:15 p.m. Statler Hall. Paula Robinson, flute; Ruth Laredo, piano. Pieces by Faure, Debussy, Messiaen, and Poulenc. Sponsored by the Dept. of Music and the University Faculty Committee on Music.

Thursday

Mar. 20, 4 p.m. Grout Room, Lincoln Hall. Patrick Will talks about Mahler studies. Sponsored by the Dept. of Music.

Mar. 20, 8 p.m. Statler Auditorium. Tony Trischka & Skyline; Russ Barenberg & Jerry Douglas. Tickets available at the Ithaca Guitar Works, Commons Coffeehouse and Rebop Records. Sponsored by Balinkie Productions and the Commons Coffeehouse.

Mar. 20, 8:15 p.m. Barnes Hall. Student Recital: Margaret Gries, violin; Sara Edgerton, cello; Sandra Mangsen, harpsichord. Works by J.S. Bach, Fontana, Giordani, Schop, and Vivaldi. Sponsored by the Dept. of Music.

Seminars

Seminar notices, unlike other calendar notices, do NOT go to Central Reservations in Willard Straight, but should be delivered to the Chronicle office, 110 Day Hall, in writing by noon Friday before publication. Each notice can be run only once, so on Thursday events please note whether you wish it published the day of the event or the week before. Please include the name and telephone number of someone who can be reached if there are questions.

Listings will cover the period from the Sunday after publication to the following Sunday. This is to accommodate those from more distant outposts who do not receive Chronicle in time to make some of the Thursday and Friday seminars which previously were listed in the same week's editions, and also in recognition of the fact that many busy people's calendars tend to fill quickly, and to give those people more advance notice.

Information for seminars listings, as noted above, still must reach the Chronicle office at 110 Day Hall by noon Friday before publication.

Agronomy: "The Kinetics, Regulation and Spatial Localization of Ion Fluxes in Zea Mays Roots," Leon Kochian, plant physiologist, USDA Plant, Soil and Nutrition Lab, 4 p.m. Tuesday, March 18, 135 Emerson.

Archaeology: "The Prehistory of Northern Chile: The Preceramic Question," Calogero Santoro, Anthropology, 4:40 p.m. Thursday, March 20, 305 McGraw.

Astronomy: "Fundamental Properties of Elliptical Galaxies," George Djorgovski, Center for Astrophysics, Harvard, 4:30 p.m. Thursday, March 20, 105 Space Sciences.

Biochemistry, Molecular and Cell Biology: "Assembly of Multi-Subunit Protein Complexes in Membranes," Dr. Nathan Nelson, Biochemistry, Roche Institute of Molecular Biology, 4:30 p.m. Friday, March 21, 204 Stocking.

Biophysics: "Application of Digitized Fluorescence Microscopy to Movement of Membrane Molecules During Cell Locomotion," Dr. Kenneth Jacobson, University of North Carolina Anatomy, 4:30 p.m. Wednesday, March 19, 700 Clark.

Biotechnology and Public Policy: "Biotechnology and Agricultural Resource Conservation; Constraints and Opportunities," Fred Buttel, Rural Sociology, 4:30 p.m. Tuesday, March 18, 701-702 Clark.

Chemical Engineering: "Transport Phenomena in Rotating Systems," Ali Nadim, Chemical Engineering, MIT, 4:15 p.m. Tuesday, March 18, 145(A) Olin Hall.

Chemical Engineering: "Phase Equilibrium in Continuous Mixtures," John M. Kincaid, Thermodynamics Division, National Bureau of Standards, Gaithersburg, Md., 3 p.m. Thursday, March 20, 145(A) Olin Hall.

Chemistry: Baker Lecture Series on "Intramolecular Dynamics," Stuart A. Rice, University of Chicago, 11:15 a.m. Thursdays and Tuesdays through March 25, Baker 200.

CISER: "Tri-County Economic Development Information System," Alan K. McAdams, Johnson School of Management, 1 p.m. Friday, March 14, 100 Caldwell.

Ecology and Systematics: "Polygenic Mutation in Phenotypic Evolution," Michael Lynch, University of Illinois, 2:30 p.m. Monday, March 17, Morison Seminar Room, Corson/Mudd Hall.

Ecology and Systematics: "Nutrient Retention and Loss Following Disturbance in a Temperate and a Tropical Forest," Peter Vitousek, Biological Sciences, Stanford, 4:30 p.m. Wednesday, March 19, Morison Seminar Room, Corson/Mudd Hall.

Floriculture and Ornamental Horticulture: "Winter Flowering Geophytes of the Cape," Ernie DeMarie, F&OH graduate student, 12:15 p.m. Thursday, March 20, 37 Plant Science.

Food Science: "Pressing Juice Out of Solids," H.G. Schwartzberg, University of Massachusetts, 4:30 p.m. Tuesday, March 18, 204 Stocking.

Geological Sciences: "Debris Transport at Modern Glacial Margins," Ed Evenson, Lehigh, 4:30 p.m. Tuesday, March 18, 1120 Snee.

International Studies in Planning: "Urban Development Issues in North Africa and the Middle East," Frank Mitchell, Urban and Regional Development Projects, Division, World Bank, 12:15 p.m. Friday, March 21, 157 East Sibley.

Jugatae: "Ecology of Mycophagous Drosophila," John Jaenike, Biology, University of Rochester, 4 p.m. Monday, March 17, Morison Seminar Room, Corson/Mudd Hall.

Materials Science and Engineering: "Thermal Wave Imaging for Materials Characterization," Jane MacLachlan, The Johns Hopkins University, 4:30 p.m. Wednesday, March 19, 140 Bard Hall.

Mechanical and Aerospace Engineering: "Mechanisms of Solids Elutriation from Gas Fluidized Beds," Edward K. Levy, Lehigh University, 4:30 p.m. Tuesday, March 18, 282 Grumman.

Natural Resources: "Cries of Thirst! Listening for Cavitation Events from the Xylem of Drought-Stressed Plants," Melvin Tyree, Botany, University of Vermont, 12:15 p.m. Tuesday, March 18, 304 Fernow.

Ornithology: "Monitoring Bird Populations Using Christmas Bird Counts," Gregory Butcher, Laboratory of Ornithology, 7:45 p.m. Monday, March 17, Laboratory of Ornithology, 159 Sapsucker Woods Road.

Peace Studies: "The Role of the Soviet Military Under Gorbachev," Malcolm Mackintosh, British

Cabinet, 12:15 p.m. Monday, March 17, 153 Uris Hall.

Peace Studies: "The Costs of the Soviet Empire," Charles Wolf, the Rand Corp., director, Rand Graduate Institute, 12:15 p.m. Friday, March 21, 153 Uris Hall.

Pharmacology: "Keeping Track of K-Channels in Epithelial Cells," David Dawson, Physiology, University of Michigan Medical School, 4:30 p.m. Monday, March 17, D101L Schurman.

Physiology: "Expression of Bovine Growth Hormone Gene in Cultured Mammalian Cells," J. J. Kopchik, Merck Sharp & Dohme, Rahway, N.J., 4:30 p.m. Tuesday, March 18, G-3 Veterinary Research Tower.

Plant Biology: "Pleiotropic Properties of Maize Monoserine Dehydrogenase II," John K. Bryan, Biological Research Labs, Syracuse University, 11:15 a.m. Friday, March 21, 404 Plant Science.

Plant Pathology: "Papaya Ringspot Virus Cross Protection; An Integrated Virus Management Model," Dennis Gonsalves, Geneva, 4:30 p.m. Tuesday, March 18, 404 Plant Science.

Pomology: "Changes in the Flavor Component of Apples During Maturation, Ripening and Storage," Elhadi Yahia, Pomology, 11:15 a.m. Monday, March 17, 114 Plant Science.

Psychology: "Language and Experience: Evidence from the Blind Child," Lila Gleitman, University of Pennsylvania, 3:30 p.m. Friday, March 21, 202 Uris Hall.

Romance Studies: "Gargantua's Letter to Pantagruel and the Education of the Prince," Edwin M. Duval, U.D. Santa Barbara, 4:30 p.m. Monday, March 17, 281 Goldwin Smith Hall.

South Asia Program: "The Early Roman Trade with India," Romila Thapar, Andrew Dickson White Professor at Large, 4:30 p.m. Tuesday, March 18k, Hollis E. Cornell Auditorium, Goldwin Smith Hall.

Textiles and Apparel: "Unifying Ideas in the Complexities of Diffusion in Polymers," Prof. C. Cohen, Chemical Engineering, Cornell, 4:30 p.m. Monday, March 17, 317 Martha Van Rensselaer Hall.

Theoretical and Applied Mechanics: "Thermal Waves Imaging for Materials Characterization," Graduate Student, The Johns Hopkins University, 4:30 p.m. Wednesday, March 19, 205 Thurston Hall.

Vegetable Crops: "Crop Losses from Photochemical Oxidants," Leonard H. Weinstein, director of environmental biology, BTI, 4:30 p.m. Thursday, March 20, 404 Plant Science.

Religious Events

Catholic

Every Saturday, 5:00 p.m. Anabel Taylor Auditorium. Mass.

Every Sunday, 9:30, 11 a.m., 5 p.m. Anabel Taylor Auditorium. Mass.

Mon.-Fri., 12:15 p.m. Anabel Taylor Chapel. Daily Mass.

Christian Science

Every Thurs., 7 p.m. Anabel Taylor Founders Room.

Episcopal (Anglican)

Every Sunday, 9:30 a.m. Anabel Taylor Chapel.

Jewish

Daily Minyan. Mon.-Fri., 7:30 a.m.; Sun., 8:30 a.m. Young Israel House, 106 West Ave.

Every Friday, 5:30 p.m. Anabel Taylor Founders Room. Shabbat Services (Conservative-Egalitarian).

Every Friday, 5:30 p.m. Anabel Taylor Chapel. Shabbat Services (Reform).

Every Friday, 5:30 p.m. Young Israel House, 106 West Ave. Shabbat Services (Orthodox).

Every Saturday, 9:15 a.m. Anabel Taylor Edwards Room. Shabbat Services (Orthodox). Kiddush to follow.

Every Saturday, 10 a.m. Anabel Taylor Founders Room. Shabbat Services (Conservative/Egalitarian). Kiddush to follow.

Korean Church

Every Sunday, 3 p.m. Anabel Taylor Chapel.

Muslim

Monday-Thursday, 1 p.m. Anabel Taylor 218. Friday, 1 p.m. Anabel Taylor Edwards Room.

Protestant

Every Sunday, 11:15 a.m. Anabel Taylor Chapel. Protestant Cooperative Ministry. Sunday Mar. 2, 11 a.m. Sage Chapel. Speaker: Daniel Little, Minister, Presbyterian Church, Ithaca. Sunday Mar. 9, 11 a.m. Sage Chapel. Speaker: Dow Marmur, Rabbi, Holy Blossom Temple, Toronto.

Theatre

Thurs. thru Sat.

Mar. 13-15, 8 p.m. *Risley Theatre. Risley Theatre presents "A Day in Hollywood—A Night in the Ukraine." This musical double feature is a revue satirizing the golden years of Hollywood and a hilarious Marx Brothers one act. Tickets are \$3.50 at the door. For reservations, call 255-5365.

Sunday

Mar. 16, 3 p.m. Risley Theatre. "A Day in Hollywood—A Night in the Ukraine."

Thurs. thru Sat.

Mar. 20-22, 8 p.m. Willard Straight Theatre. "Becoming Memories," a new play by Arthur Giron. David Shookhoff, guest director at Theatre Cornell, directed the original production at the Illusion Theatre in Minneapolis. The play depicts a cross-section of Americana through photographs and familiar stories woven by the characters. For reservations and information call 255-5165.

Baroque Soloists, Bilson in Concert

The next concert of the Baily Hall Series is by English Baroque Soloists, John Eliot Gardiner conducting, with Malcolm Bilson, fortepiano soloist, at 8:15 p.m. Saturday, April 5. The all-Mozart program will include two piano concertos (K414 and K271) and the Symphony No. 29.

The English Baroque Soloists group was founded by Gardiner in 1978 to develop a style and repertoire of performances on original and replica baroque instruments.



Malcolm Bilson at the fortepiano.

Among several award-winning albums to its credit is Purcell's "Fairy Queen," which won the Grand Prix du Disque in 1981. The orchestra tours the U.K. and Europe with regular appearances at major music festivals. Gardiner most recently has been appointed music director of the Opera de Lyon.

Bilson is professor of piano at Cornell, a post he maintains in parallel with an extensive concert and recording schedule throughout the U.S. and Europe. He is recognized as the nation's leading exponent of the 18th century fortepiano with a widespread reputation for his artistry and scholarly understanding of the instrument. He has appeared as soloist with the Los Angeles Philharmonic and during the past two summers in Avery Fisher Hall's Mostly Mozart Festival with an orchestra of 18th century instruments conducted by Christopher Hogwood. Bilson is music director of the series "On Original Instruments" in New York City's Abraham Goodman House.

The English Baroque Soloists and Bilson have joined forces to record all of the Mozart piano concertos on period instruments for Deutsche Grammophon's Archive label. "Bilson and Gardiner achieve perfect blend in Mozart ... Bilson is a superb pianist who has focused on the fortepiano, bringing to it not only authentic performance practice but playing of crisp brilliance and elegance as well," Stereo Review said in August 1984.

Tickets for the concert will go on sale Tuesday, March 18 at the Lincoln Hall ticket office (tel: 255-5144), which is open Monday through Friday from 9 a.m. to 1 p.m. Student discounts are given.

Graduate Bulletin

SPECIAL AWARDS AND SCHOLARSHIPS: Year abroad in Cambridge, England, Year Abroad in People's Republic of China, and Liu Memorial Award. Graduate faculty representatives must nominate candidates for the awards by submitting the specified materials and information to the dean's office by the deadline indicated for each award.

Year Abroad in Cambridge, England; Clare Hall Fellowships—provides transportation and internal support for the academic year. Open to graduate students in all fields. Nominations from GFRs should include cover letter, supporting letters from other faculty, and a statement of purpose or brief research proposal from the student. Deadline: March 28, 1986.

Chinese University Study Year Abroad; Beijing and Fudan Universities offer internal support (tuition and supplies, housing, stipend and medical insurance) for an academic year of study and research at each institution. Open to graduate students in all fields. Must have had at least one full academic year of Chinese language study, or the equivalent, to attain an intermediate level. GFRs should submit a cover letter, supporting recommendations from other faculty members (including an evaluation from a Chinese language professor or instructor) and a statement of proposed study from the student. Deadline: March 21, 1986.

Liu Memorial Award—For the 1986 award year, there is \$3,200 available. The final number and dollar amount of the awards will be decided

by the selection committee. Preference is given to graduate students of Chinese descent irrespective of citizenship. GFRs should submit a nominating letter, several supporting letters from other faculty members familiar with the student, and any other information that would be helpful to the committee in evaluating the student. GFRs may wish also to have the student compose a brief statement summarizing graduate progress, career plans, etc. Deadline: April 4, 1986.

BUTTRICK-CRIPPEN FELLOWSHIP—provides a full year of support during which the fellow can devote him or herself to the study and practice of teaching composition, both within and beyond the context of his or her own discipline. Open to candidates from any field. Preference will be given to those who are enrolled in a Ph.D. program, and the award or awards are intended for graduate students who have had substantial teaching experience already. The successful candidate will spend the fall semester preparing a new course for the Freshman Seminar Program, and will then teach that course in the spring. For the 1986-87 year, the award will provide a stipend of \$8500, tuition, and an opportunity to apply for summer support in the amount of \$2200. Applicants should submit to their GFR a reasonably full description of the course they would like to teach, a vita, and other supporting material. Deadline: GFRs should submit their nominations to Professor Rick Bogel, Department of English, 159 Goldwin Smith Hall, by March 31, 1986.



Two members of the ensemble for Theatre Cornell's production of "Becoming Memories," are Dana Case and Charles Ganim Jr. The play by Arthur Giron will open at 8 p.m. Thursday, March 20, in Willard Straight Theatre. Tickets are available at the Theatre Cornell Box Office in Willard Straight Hall.

Cuomo Plan Would Expand Scope Of Supercomputer's Operations

Businesses, universities, and research centers throughout the Northeast soon might be able to tap into Cornell's supercomputer as part of a plan proposed by New York Gov. Mario Cuomo.

Under Cuomo's proposal, a network of fiber optic cables would be laid along 4,489 miles of interstate highways in nine states. The cables would carry high-speed voice, data, and video transmissions by laser beam along special glass fibers.

The cables would provide a high-speed link between businesses and provide access to the region's two supercomputers at Cornell and at the Von Neumann Center for Super Computing in Princeton, N.J.

"We are at a critical stage in high tech industrialization," Cuomo said. "High tech cannot reach its full potential without adequate transmission lines."

William Schrader, executive director of Cornell's Center for Theory and Simulation in Science and Engineering, said, "The governor's fiber plan would be an enormous help to academic research efforts underway in Northeast universities. It is also a logical extension of the New York State Education and Research Network and the networking efforts of the National Science Founda-

tion."

Schrader is president of NYSENet, a not-for-profit telecommunications corporation that proposes to link 15 research institutions in the state by means of a high-speed computer network.

"The governor's interest in economic development is directly related to high-speed telecommunications between academic and industrial researchers," Schrader added.

Compared with other telecommunications technologies, the cost of communications through fiber is decreasing rapidly. The first commercial use of fiber optic cables occurred at the 1980 Winter Olympics at Lake Placid, N.Y. Since then, optical cables have been installed in several cities, including New York City.

Cuomo presented the plan in Washington last month when he was elected chairman of the Coalition of Northeastern Governors.

Aside from gaining the cooperation of his fellow governors, Cuomo will need to gain federal support for his project. A federal regulation restricts the right-of-way on federal interstate highways. Cuomo requested a waiver in January to allow the installation of cables along the length of the New York State Thruway.

Judicial Administrator

Case Summaries for January and February

The Office of the Judicial Administrator reports the following case summaries for January and February 1986. The abbreviations used are WR for written reprimand, CS for community service, rest. for restitution and susp. for suspended. The number of defendants in each case is one (1) unless otherwise specified.

Furnishing false information to the University: WR; 30 hrs CS

Theft of a sweatshirt from the Campus Store: WR; 25 hrs CS

Endangerment to others in a dorm by disconnecting wires to the fire alarm system: WR; 40 hrs CS susp.

Failure to comply with a lawful order of library staff to return a book to the Engineering Library: WR; 8 hrs CS susp.

Damage to University property by driving a car on the Arts Quad: WR; 40 hrs CS susp. and \$998 rest.

Attempt to steal a wallet from the Campus Store: WR; 25 hrs CS with 5 susp.

Possession, on campus, of a pair of nunchakas, a dangerous instrument: WR; 40 hrs CS with 25 susp.

Breaking a window in a dorm: WR; 40 hrs CS

Endangerment to persons and property by throwing burning index cards out of a fourth floor window of a dorm: WR; 40 hrs CS with 20 susp.

Endangerment to persons and property by lighting a bottle rocket: WR; 40 hrs CS

Forging an I.D. and presenting same at Noyes Center Pub to buy an alcoholic beverage: WR; 30 hrs CS with 10 susp.

Refusal to comply with lawful orders of a Public Safety Officer: WR; 8 hrs CS susp.

Theft of a carton of pudding pops from Sage Dining: WR; 25 hrs CS

Theft of food from Willard Straight Dining: WR; 25 hrs CS susp.

Possession and misuse of a stolen University parking permit: WR; 15 hrs CS

Alteration of the date on his driver's license and misuse of same: WR; 30 hrs CS with 20 susp.

Misuse of an I.D. belonging to another person: WR; 30 hrs CS with 20 susp.

Alteration of a Cornell University one-day U permit and use of same: WR; 15 hrs CS susp.

Harassment of others by firing a blank gun in Clark Hall: WR; 40 hrs CS with 20 susp.

Trustees Meet Here Next Week

Cornell's Board of Trustees and its Executive Committee will meet in open sessions on campus Thursday and Friday, March 20 and 21. Open sessions of several committees are planned for March 20.

The full board will meet at 9:30 a.m. Friday, March 21, in the auditorium of the Boyce Thompson Institute for Plant Research. Among matters to be discussed are issues related to financial aid; renovations to the former Comstock Hall, which is now home to the telecommunications department, Cornell Computer Services, and the Theory Center supercomputer; and reports of gifts to the university and to the Cornell Fund. Joseph Bugliari, dean of the faculty, also will report to the board during its open session.

During the closed session, board members will hear reports on and consider several financial, facilities, and personnel matters.

The Executive Committee will meet at 2:15 p.m. March 20, in the auditorium of Boyce Thompson Institute. Among matters to be considered are proposed 1986-87 budget policies and funding for the university's Bio-

technology Institute.

Four other committees will meet in open session March 20, in Statler Inn (unless indicated otherwise); their times and locations are:

- 8 a.m., Buildings and Properties, Day Hall Conference Room;
- 4 p.m., Committee on Land Grant and Statutory College Affairs, Sun Room;
- 4 p.m., Committee on Academic Affairs, North Room;
- 6:30 p.m., Audit Committee, Willcox Room.

Members of the public who wish to attend the March 20 open meeting of the Executive Committee and the March 21 open meeting of the Board of Trustees may obtain tickets at the Information and Referral Center in the Day Hall lobby beginning at 9 a.m. Tuesday, March 18. A limited number of tickets will be available, one per person, on a first-come, first-served basis.

SAGE CHAPEL

Historian, Theologian Costas to Give Talk

Orlando E. Costas, Dean and Judson Professor of Missiology at the Andover-Newton Theological Seminary in Newton Centre, Mass., will preach at Sage Chapel at 11 a.m. Sunday, March 16.

Costas, a native of Costa Rica, is an historian and theologian of the Protestant Church in Latin America and author of several books. As an ordained Baptist minister, he was a leader in the Institute for In-depth Evangelism in the Caribbean area and served for four years as professor of communication and missiology at the Latin American Biblical Seminary in San Jose, Costa Rica. He was a participant at the Lausanne International Congress on Evangelization and a member of study commissions of the World Council of Churches. Costas has also been a William Paton Fellow at Selly Oaks Colleges in Birmingham, England.

Barton Blotter

Three stainless steel animal cages valued at \$600 were among cash and valuables worth \$3,457 reported missing in 19 thefts on campus from March 3 through 9, according to the morning reports of the Department of Public Safety.

Other thefts included compact disc stereo equipment worth \$920 taken from Rand Hall, \$270 worth of photography equipment stolen from Rand Hall, a sofa and four lamps worth \$150 taken from the Thurston Court Apartments, and two mirrors, a toilet seat, and women's restroom door sign worth a total of \$92.50 taken from University Hall No. 1.

Six thefts of cash totaling \$190 were reported. They included \$40 taken from Baker Hall, \$35 from Helen Newman Hall, and \$68 stolen from a vending machine in Robert Purcell Union.

Three persons were referred to the judicial administrator on separate charges of criminal mischief, reckless endangerment, and harassment.



Center Stage Earth Movers: Members of the university's Performing Arts Center construction task force look on last week as a 50-ton track hoe begins excavation work in Collegetown for the \$20 million facility. Left to right are Donna Raynsford, director of capital projects at Cornell; Robert M. Matyas, Cornell vice president for facilities and business operations; Michael Wilford of the architectural firm, James Stirling, Michael Wilford & Associates; and Ed Rosen, vice president of the construction management firm Lehrer McGovern. Beginning this week, the pedestrian walkway on the north side of the site, along the gorge, will be torn up and new utility lines installed. The walkway will be restored in April and a construction fence will be erected. Vice President Matyas said that a walkway at the site will be maintained throughout the project "to allow plenty of opportunity for sidewalk superintendents." (This caption was incorrectly run with another photograph in last Thursday's Chronicle, due to a press room error.)

Management School Forum In Belgium

Three of the nation's leading authorities on economics, business, and finance will offer insights of their areas of expertise March 21-22 in Brussels, Belgium, at an international business forum sponsored by the Johnson Graduate School of Management.

Economist Alfred E. Kahn, business administration professor Harold Bierman Jr., and manufacturing professor L. Joseph Thomas, all of Cornell, will address the Johnson School program at the Brussels Hilton.

This is the first program of its kind sponsored by the Johnson School. Cornell has more than 1,300 alumni living in Europe, including graduates of the Johnson School and its Executive Development Program.

Kahn, the Robert Julius Thorne Professor of Political Economy, will deliver the keynote address.

Kahn will explain how a massive influx of foreign capital has helped sustain the demand-pulled economic recovery in the United States —contributing to lower interest rates, easing inflation, and a strong dollar on world markets.

Bierman, 1985 recipient of the Dow Jones Award from the American Assembly of Collegiate Schools of Business, is the Nicholas H. Noyes Professor of Business Administration at the Johnson School of Management. Recently, he was professor-in-residence at Prudential-Bache Securities, Inc.

Thomas, 1985 winner of the Exxon Award of the American Assembly of Collegiate Schools of Business, is the Nicholas H. Noyes Professor of Manufacturing at the Johnson School, and coordinator of the school's Executive Development Program. He is a pioneer of classroom application of a factory simulation model recently adopted by Hewlett-Packard and General Motors.

Integrated Pest Management Program Saves Environment, Money

By SUSAN S. LANG

Every year, huge quantities of costly agricultural chemicals are applied to crops as dairy farmers try to protect their precious plants and animals from voracious pests. Sometimes, the chemical applications are unnecessary because pest levels are so low that they don't pose a threat. Other times, the spraying is too early or too late, thus wasting time, money, and chemicals, and causing potential harm to the equipment. To reduce the use of chemicals and improve other farm practices, Cornell scientists have implemented the dairy/field crops integrated pest management (IPM) program. It

not only spares the environment, but also saves farmers thousands of dollars by increasing the efficiency and the net profitability of dairy farming, the leading segment of New York's agricultural industry.

Now in its fourth year, the IPM program employs a wide range of scientific disciplines in assessing all phases of dairy operations. Its aim is to boost production efficiency by identifying major pests that threaten animal health as well as factors that limit production of field crops.

The three major components of the dairy field crops IPM program are pest management, crop production, and crops record

keeping, according to J. Keith Waldron, a Cornell Cooperative Extension associate and the statewide coordinator of the program.

Basically, the program involves the use of "scouts," or inspectors, who identify factors that might limit productivity of dairy farms. Managed by county ag agents, scouts Cornell Cooperative Extension, the scouts visit participating farms about once a week.

The scouts monitor problems such as rising pest populations that affect crops and animals, soil compaction, soil infertility, row spacing, weather conditions, and disease-susceptible crop varieties, as well as general crop conditions and plant growth.

Agricultural agents, with the expertise of Cornell scientists, then use the summaries prepared by the scouts to provide information, techniques, and management options to farmers to help them reduce or eliminate pest and production problems.

"Regular scouting helps correct or avoid problems before economic losses occur, thus making it unnecessary to take costly control actions," says Don Rutz, assistant professor of entomology in the College of Agriculture and Life Sciences.

"The environment is spared because the program helps farmers use chemicals more efficiently, thus eliminating the need to use chemicals unnecessarily," Rutz explains. "Also, better application methods are employed and naturally occurring beneficial organisms are used whenever possible."

In addition to regular field and animal inspections, the IPM program also maintains comprehensive field records to help growers store information about crop planting and performance and to provide better evaluations of the economic impacts of management actions.

Although exact savings from the IPM program have not yet been determined, one producer who regularly treated alfalfa for insects, for example, reported that he saved more than \$2,000 per year by using scout reports, which saved him unnecessary spraying.

While the cost of the program — about \$4 or \$5 per acre per season — is now partially underwritten by Cornell, Waldron expects the returns to be far greater. Eventually, the program will be self-sufficient by assessing farmers a per acre fee for scouting services.

"Our IPM program is not anti-chemical but rather uses chemicals or other management options when they are appropriate and justified," Waldron explains. "Scouting programs provide farmers with information on the real needs of their crops. This information helps farmers avoid unnecessary applications of pesticides and fertilizers."

By the same token, scouts can serve as the grower's "early warning" system, he notes.

Finding problems early allows growers more time to select appropriate actions such as early harvest, cultivation, or the timely use of selective chemicals to help avoid or reduce crop losses.

"Based on detailed information from each field, decisions are made whether or not to act at certain times of the year. The result is an efficient system that combines production and pest control methods that are compatible, economical, and environmentally sound and are designed to maximize net profitability of crop production," Waldron says.

Cornell's IPM program is the only one of its kind that looks at the dairy farm as a full production unit. Furthermore, it is one of the few pest management systems that are based on systematic monitoring and forecasting of pest problems. As a result, thousands of pounds of costly herbicides, insecticides, and fungicides are saved.

Cornell's dairy/field crops IPM program, which includes entomologists, plant pathologists, agronomists, agricultural economists, veterinarians, plant breeders, agricultural engineers, natural resource specialists, and agricultural extension agents, involved 103 farms in five counties (Cattaraugus, Chautauqua, Erie, Rensselaer, and Wyoming) last summer. This summer, it is expected that several more counties will participate in the program.

The dairy/field crop IPM program is just one facet of Cornell's IPM efforts; there are also IPM programs for fruits, vegetables, and horticultural and ornamental plants.

Cinema

Continued from Page 3 (bold face)

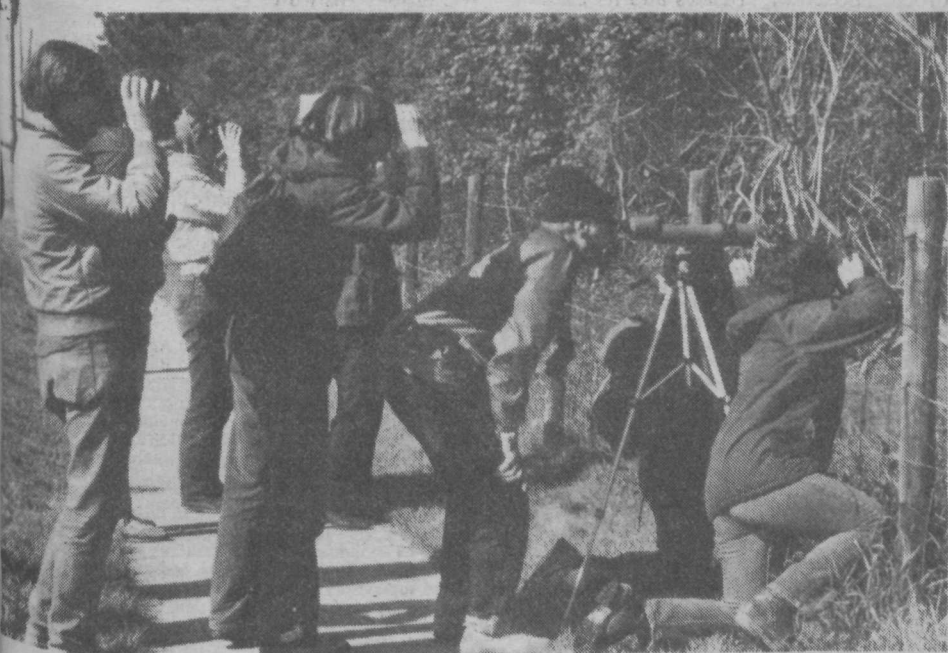
To examine the problem, a commission of faculty, staff, and students was appointed in 1970. The Russell Commission (headed by Charles Russell, now professor emeritus of communication arts) recommended one coordinated film program that would offer all types of films.

That commission also recommended that the university pay salaries of Cornell Cinema's full-time staff, but the university ruled that Cornell Cinema be self-sufficient. In 1981, Cornell began providing an annual \$10,000 grant to Cornell Cinema.

Today, that grant pays only 3 percent of the \$300,000 budget. The cinema board plans to seek more salary support from the university.

"Cornell Cinema offers a more relaxed atmosphere for viewing film than a commercial theatre," Herskowitz says. "University audiences are more spontaneous. That's the atmosphere our films need."

Elaine Main is assistant director of public information at Wartburg College, Waverly, Iowa. She is studying at Cornell this term.



Bird-watchers concentrate their attention on a heron colony during a field trip to New Jersey.

Ornithology Lab to Offer Course

The Laboratory of Ornithology will offer an eight-week, non-credit course in field ornithology March 26 through May 18.

The course is for those with a beginning interest in birds; identification and behavior of spring birds that migrate through the Ithaca area will be emphasized. The instructor will be Stephen W. Kress, laboratory associate at the ornithology laboratory and a biologist for the National Audubon Society.

Saturday field trips to nearby bird watching habitats such as Montezuma National Wildlife refuge and the shores of Lake Ontario will be included. There is also an optional weekend trip to the salt marsh habitat of Brigantine National Wildlife Refuge in

southern New Jersey.

During Wednesday evening meetings at Cornell's Laboratory of Ornithology, participants will view slides and listen to tape recordings of local birds that might be seen on the weekend field trips. Lecture topics will also include nesting behavior, migration, and bird song.

Enrollment fee for the course, including field trips, is \$80. The fee for participating in lectures only is \$40. Members of the laboratory receive a 10 percent discount. Registration is at the Laboratory of Ornithology, 159 Sapsucker Woods Road, Ithaca. For further information, call 255-5056.

Number 10

Please Post

March 13, 1986

Cornell University**University Personnel Services****Day Hall****Ithaca, New York 14853****Please Note:**

Job Opportunities is a publication of Staffing Services and is distributed each Thursday through the Cornell Chronicle.

Job Opportunities lists current vacancies with the University, consistent with the University's commitment to promotion from within, affirmative action and equal opportunity employment.

Employee Transfer Applications: Em-

ployees who wish to transfer to other jobs within the University should complete a separate Employee Transfer Application form for each position and submit the form(s) to Staffing Services. Individuals with official University layoff status are given preference in referrals.

Applicants: Applications for employment are available at Cornell University's

employment office at East Hill Plaza at the intersection of Ellis Hollow Road and Judd Falls Road in Ithaca, from 9:00 a.m. to 12:00 noon, Monday through Friday. Completed applications can be submitted through the mail to University Personnel Services, Staffing Services, 160 Day Hall, Ithaca, NY 14853.

This listing is also available on CUINFO, Cornell University's computerized information service. For further details on CUINFO, contact the Information

and Referral Center.

Full-time jobs are 39 hours per week unless otherwise indicated. Jobs listed as SO, U1 and U2 are represented by bargaining units.

Position: Systems Programmer III (2 positions) (Repost)

Department: Theory Center

Description: Responsible for systems analysis, design, programming and documentation for projects in the Cornell Production Supercomputer Facility under general supervision. Will be a major source of software support and technical leadership for both users and other Theory Center staff.

Requirements: Master's degree or equivalent with a wide range of programming experience utilizing high-level languages. Demonstrated ability to work in scientific or large-scale computing environment. IBM mainframe (VM/CMS) and Fortran experience a plus. Please send cover letter and resume to Cynthia Smithbower.

Job Numbers: PT123, PT461

Position: Assistant Director of Public Affairs

Department: College of Engineering - Dean's Office (Public Affairs)

Description: Responsible for developing and implementing programs for Engineering alumni; work directly with Dean, faculty, volunteers, and members of public affairs staff to schedule and plan events both on and off campus. Maintain computer based alumni association files and records; oversee annual membership campaign.

Requirements: Bachelor's degree or equivalent in education and training. Excellent communications and writing skills. Experience working with volunteer organizations preferred. Knowledge of personal computers desirable. Initiative and ability to set own priorities. Please send cover letter and resume to Ralph D. Jones by March 14, 1986.

Job Number: PA086

Position: Senior Applications Programmer/Analyst (Repost)

Department: Computer Services - APS

Description: As a member of the technical support group; will maintain and modify the data base and fourth generation programming environment in which administrative systems are developed.

Requirements: Bachelor's degree with computer courses and 3 to 5 years computing experience. Must be able to program in at least two languages including IBM 370 assembler. Must have knowledge of operating systems, especially VM/CMS. Familiarity with MVS, data base concepts and mini-micro computers preferred. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT469

Position: Hungry Bear Deli Manager

Department: Unions & Activities - Robert Purcell Union

Description: Responsible for coordinating night time dinner services and supervising and inventory purchasing, daily maintenance of area, pricing of items for resale, monthly reports. Ten month appointment.

Requirements: High school diploma or equivalent. Managerial and supervisory experience. Experience in use of cash register, food handling, preparation and food retailing, and skills dealing with customers and supervision of student employees. Please send cover letter and resume to Ralph D. Jones by March 13, 1986.

Job Number: PA083

Position: Research Support Specialist II (Repost)

Department: Pharmacology

Description: Use of perfusion apparatus; provide technological support for research programs; training of staff; design and plan experiments; administration of research lab; maintain all records for lab such as radioisotope, animal, inventory, and supplies.

Requirements: Bachelor's degree or equivalent education and experience. Two years experience in lab and research procedures. Experience with specialized perfusion apparatus. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT234

Position: Director, Production Supercomputer Facility (Repost)

Department: Theory Center

Description: Provide administrative and managerial support to a new research facility. Major responsibilities include developing and implementing an operating plan and budget, oversee staffing of facility as well as act as liaison with corporate representatives.

Requirements: PhD in scientific field desirable in addition to some experience in computer science. Experience with large scale computation. At least three years experience in senior management position, preferably in computer services environment. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT113

Position: Budget Analyst (Repost)

Department: Administrative Services

Description: Provide budget forecasting and preparation, financial sensitivity analysis, prepare monthly reports, income trend analysis in support of \$50 million department budget.

Requirements: Bachelor's degree or equivalent. Two years experience in accounting and/or budgeting. Knowledgeable in computers (Lotus 1-2-3, Symphony). Excellent verbal and written communication skills. Please send cover letter and resume to Ralph D. Jones.

Job Number: PA4610

Position: Payroll Manager

Department: Controller (Endowed Accounting)

Description: Manage the Endowed Payroll Office. Responsible for payroll schedules while adhering to University policies and procedures. Work with university administrators and computer personnel to maintain and update the payroll system. Review tax legislation and specify program changes to meet governmental withholding and reporting regulations. Counsel employees on payroll-related matters. Supervise a staff of seven.

Requirements: Bachelor's degree in business or accounting or equivalent. 3 to 5 years experience in large payroll or accounting office. Familiarity with computerized financial systems is desirable. Must possess demonstrated supervisory ability and excellent verbal and written communication skills. Please send cover letter and resume to Ralph D. Jones.

Job Number: PA033

Position: Director

Department: University Press

Description: Oversee financial affairs of the Press's operations; establish managerial policies for the professional and nonprofessional staff, and develop, in conjunction with a faculty Board of Editors, editorial policy for the Press, which has a staff of 50, publishes approximately 100 titles yearly, and has annual sales of approximately \$4 million.

Requirements: Bachelor's degree. Demonstrated successful experience in the editorial, managerial, and financial aspects of university publishing, or equivalent experience. Please send cover letter and resume to Ralph D. Jones.

Job Number: PA026

Clerical

CURRENT EMPLOYEES should submit an employee transfer application, resume and cover letter. Also, if you are interested in a career development interview, please contact Esther Smith at 5-6874 to schedule an appointment.

OUTSIDE APPLICANTS should submit an employment application and resume. Applications and resumes typically remain active for three months; typing test scores remain on file for one year. The clerical section uses an automatic referral system whereby outside appli-

Cornell University is an equal opportunity, affirmative action employer.

dures and techniques, of system utility programs, system control languages and SCRIPT text formatting. Please send cover letter and resume to Cynthia Smithbower by March 28, 1986.

Job Number: PT108

*Position: Executive Staff Assistant

Department: Office of Vice President of Finance and Treasurer

Description: Provide executive staff and administrative support to the Vice President of Finance and Treasurer. Requires independent decision of reports including compiling and reorganizing financial documents. Prepare correspondence, reports, memos, etc.; develop effective tracking and maintenance of all documents via manual filing systems and computerized systems; schedule and organize travel and accommodations, meetings, conference and special engagements; manage departmental accounts; handle inquiries (telephone and in person); mail; other projects as assigned.

Requirements: bachelor's degree or equivalent experience. Minimum 5 to 7 years administrative or secretarial support experience. Knowledge of Cornell University preferred. Background in areas of banking, investment and other financial fields helpful. Experience in use of word processing equipment and personal computers. Managerial, organizational, and communication skills (verbal and written) essential. Ability to work independently. Please send cover letter and resume or call in confidence to Esther L. Smith by March 21, 1986.

Minimum Biweekly Starting Salary: \$543.50

Job Number: PC1011

*Position: Co-op Coordinator

Department: Dining Services

Description: Administer the contract dining plan (Co-op) and maintain the computerized door-checking and billing system (ACCESS). Act as salesperson for Co-op; handle daily Co-op transactions (adds, changes, lost cards, etc.); coordinate fall, spring and summer Co-op registration; respond to inquiries and complaints from students and parents; prepare and reconcile Co-op billings.

Requirements: Associate's degree and two years of related experience, or equivalent combination of education and experience. Supervisory experience preferred. Excellent organizational and customer relations skills.

Minimum Biweekly Starting Salary: \$543.50

Job Number: PA1013

*Position: Research Support Specialist II

Department: Food Science and Technology (Geneva)

Description: Support program in food carbohydrate polymer research. Conduct research on carbohydrate polymers and other chemical constituents of fruits and vegetables using modern instruments.

Requirements: Bachelor's degree in chemistry; Master's degree preferred. Facility in operating complex lab instrumentation, in performing chemical separations and analyses, and in using a computer to analyze and tabulate results. Ability to research and adapt analysis techniques from published sources.

Minimum Biweekly Starting Salary: \$543.50

Job Number: PT1012

Position: Senior Trust Officer

Department: Vice President Public Affairs

Description: Responsible for generating and administering trust and estate gifts, new and recurring planned gifts. Meet with potential donors, advise donors and staff on financial planning gifts. Work closely with Development Office and University Counsel's Office. Supervise the Trust Office.

Requirements: Law degree. 5-10 years experience in trust and estate work, excellent communication and management skills. Please send cover letter and resume to Ralph D. Jones by March 21, 1986.

Job Number: PA0911

Position: Area Manager I

Department: Theory Center

Description: Supervise a staff of 12 distributed consultants including hiring and training. Establish and maintain active relationships with supercomputer users.

Requirements: Master's degree, 3-5 years in related position. Excellent communication, interpersonal and organizational skills. Mainframe computing experience. Ability to work with a variety of users and to speak with them at their level of comprehension. Working knowledge of various computer languages, especially Fortran. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT098

Position: Technical Specialist II

Department: Theory Center

Description: Provide software support and technical advice and guidance for all aspects of the Theory Center's networking efforts.

Requirements: Master's degree in computer science plus three years of Unix/C systems programming. Demonstrated expertise in designing, developing, and maintaining system software. Complete understanding of DARPA networking protocols, such as TCP/UDP/IP and their implementation in Berkeley Unix (preferably on a range of machine architectures). Knowledge of other networking protocols highly desirable. Good interpersonal skills. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT0910

Position: Research Support Specialist III

Department: Agricultural Engineering

Description: As a team member, will study the major end-use electrical loads and demands, and methane-cogeneration on Upstate New York farms.

Requirements: Masters of Engineering, Master of Science in agricultural engineering or equivalent. Knowledge of farm operations and equipment, electrical systems and methane production and cogeneration. Programming ability using Pascal is necessary. Please send cover letter and resume to Cynthia Smithbower by March 21, 1986.

Job Number: PT096

New Statutory Salaries become effective March 27, 1986.

Administrative/Professional

The minimum salaries listed are for recruitment purposes only.

*Position: Budget Director

Department: Endowed Budget Office

Description: Coordinate fiscal data and develop annual program and financial plans; prepare budget documents and reports; monitor and control operating budget; develop reliable forecasting procedures and provide cost accounting and analysis capabilities and staff support to University officers.

Requirements: Master's degree. Ten years of experience in development of financial policies and operations. Demonstrated outstanding communication and interpersonal skills. Experience in a large decentralized and non-profit organization. Please send cover letter and resume to Ralph D. Jones by May 1, 1986.

Job Number: PA105

*Position: Auditor II (Repost)

Department: Auditor's Office

Description: Under supervision of the Assistant Director of Auditing, perform audits within all areas of the university's operations including cash, investments, inventories, receivables, payables, payroll, grants and contracts and computer services. Evaluate internal controls and determine compliance with university procedures. Draft reports outlining results of audits for key university administration. Provide direction and supervision to Audit support staff and other Audit personnel in the performance of some audit assignments.

Requirements: Bachelor's degree in accounting. At least two or three years of experience in auditing or related business experience is necessary. Please send cover letter and resume to Ralph D. Jones by March 27, 1986.

Job Number: PA2814

*Position: Senior Research Support Specialist

Department: Agricultural Economics

Description: Responsible for planning, conducting and reporting research on the economic, financial and technical aspects of alternative biotechnology products and processes relevant to agriculture and the food industry. Position funded until September 30, 1987; extension based on continued funding.

Requirements: Master's or Ph.D. in economics or agricultural economics. Coursework in biological sciences or chemistry helpful. Knowledge and demonstrated use of computers, economic theory, quantitative methods and techniques of risk analysis required. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT109

*Position: Systems Programmer III

Department: Computer Services

Description: Design, implement, install, document and maintain systems software or significant subsystems (including both MVS/SP and MVS/XA). Adapt software extension in areas of accounting and resource allocation.

Requirements: Bachelor's degree or equivalent with related computer courses. 3 to 5 years systems programming experience including IBM 370 assembly language. Significant knowledge of the operation of and exits in MVS for maintaining and adapting software extensions in areas of accounting and resource allocation. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT101

*Position: Systems Programmer III

Department: Computer Services

Description: Design, implement, install, document, and maintain systems software or significant subsystems in VM-CMS (including both VM/HPO and VM/XA-SF). Maintain and adapt software for VM/HPO as well as design and implement functional enhancements to VM/XA-SF.

Requirements: Bachelor's degree or equivalent with related computer courses. 3 to 5 years systems programming experience including IBM 370 assembly language. Significant knowledge of the internal operation of VM systems for maintaining and adapting software for VM/HPO and designing and implementing functional enhancements to VM/XA-SF. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT103

*Position: Senior Systems Programmer

Department: Computer Services

Description: Design, implement, install, document and maintain networking (using SMP/E) and VM. Provide a foundation for maintaining and adapting software to support state-of-the-art communications providing connectivity with national and international networks.

Requirements: Bachelor's degree or equivalent with related computer courses. 4 to 6 years systems programming experience including IBM 370 assembly language. Knowledge of Pascal is desirable. In-depth knowledge of the interfaces between operating systems (including RSCS and JES2). Experience with TCP/IP is desirable. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT102

*Position: Systems Programmer I

Department: Computer Services; Academic Computing

Description: Install selected applications programs and packages on the test and production systems of the IBM mainframes. Run vendor-supplied tests, refer problems to installation manager, update documentation, write bulletin articles, perform consulting, participate in staff tests during installations. Help design and modify installation.

Requirements: Bachelor's degree with computer courses or equivalent. Familiarity with CMS and one of the CMS editors. Some knowledge of installation proce-

cants are referred to positions for which they are considered qualified and competitive. Unless otherwise advertised, requests to be referred to a specific position will not be accepted. Applicants who are referred to a department for review will be contacted by the department if an interview is necessary.

NOTE: OPEN INTERVIEWING FOR OUTSIDE APPLICANTS interested in clerical positions will be conducted every Wednesday afternoon from 1:00 - 6:00pm. in our East Hill Plaza Employment Office. No appointment is necessary, however a short wait may be required. Call Esther Smith or Lauren Worsell if you have any questions.

*Position: Accounts Assistant, GR20
Department: Public Affairs Regional Offices
Description: Maintain accounting records; verify and process vouchers for 10 regional offices, four college/departments accounts and the Director's office. Prepare payroll vouchers and keep vacation/sick leave records; order supplies; assist in special projects.

Requirements: Associate's degree in accounting or equivalent. Light typing. Minimum of two years accounting experience preferably at Cornell.
Minimum Biweekly Starting Salary: \$468.29
Job Number: C107

*Position: Secretary, GR20
Department: College of Architecture, Art & Planning Dean's Office

Description: Provide secretarial support to the Assistant to the Dean with additional work assignments from the College Directors of Operations and External Affairs. Word processing and data base computer input; type; file; photocopy; act as Dean's Office receptionist.

Requirements: Associate's degree or equivalent. Medium typing. Minimum 2 to 3 years related work experience. Working experience with personal computer/word processing. Knowledge of Cornell helpful. Strong organizational, office and interpersonal skills. Ability to work independently and maintain confidentiality.

Minimum Biweekly Starting Salary: \$468.29
Job Number: C108

*Position: Administrative Aide, GR20 (Repost)
Department: Johnson Graduate School of Management

Description: Coordinate and execute all business aspects of the annual fund raising program. Plan, implement and supervise all phonathons; coordinate all aspects of a direct mail campaign - over 20,000 pieces per year. Some travel involved.

Requirements: Associate's degree or equivalent. Medium typing. Minimum 1-3 years of administrative/secretarial experience. Strong communication skills. Familiarity with fund raising and computers helpful.

Minimum Biweekly Starting Salary: \$468.29
Job Number: C394

*Position: Secretary, GR19
Department: Vice President for University Relations
Description: Process all typed material and perform a variety of other secretarial/clerical and office dealing with all of Cornell's varied publics. Order office supplies and materials; maintain files; handle completed travel; order and maintain subscriptions to periodicals, newspapers, and magazines. Other duties as assigned.

Requirements: Associate's degree or equivalent. Heavy typing. Minimum 2 to 4 years secretarial experience. Excellent typing speed with word processing experience. Requires knowledge of and attention to proper spelling and appropriate grammar and punctuation. Requires organizational skills. Ability to work independently and handle confidential material. Knowledge of Cornell and/or related administrative systems would be helpful.

Minimum Biweekly Starting Salary: \$443.78
Job Number: C105

*Position: Secretary, GR18
Department: Civil and Environmental Engineering
Description: Provide secretarial support for an Endowed Chair faculty member. receive and place telephone calls; file; draft correspondence and reports using dictaphone; input, format, revise and prepare final printouts of highly technical manuscripts using word processor; act as backup word processor operator when needed.

Requirements: High school diploma or equivalent; business or secretarial school desirable. Heavy typing. Minimum 1 to 2 years experience. Knowledge of or willingness to learn technical word processing. Good organizational skills.

Minimum Biweekly Starting Salary: \$418.85
Job Number: C106

*Position: Secretary, GR18
Department: Department of Human Service Studies
Description: Provide secretarial support for three to six faculty in large department. Type class materials, reports, correspondence, manuscripts, standard and travel vouchers; answer telephone; pick up and sort mail; arrange travel; order texts; make copies; run campus errands. Other duties as assigned.

Requirements: High school diploma or equivalent; business or secretarial school desirable. Heavy typing. Previous secretarial experience (in an academic setting preferable). Good interpersonal, telephone and machine/manual transcription skills. Knowledge of IBM PC using WordPerfect or willingness and aptitude to learn. Ability to work independently and under pressure.

Minimum Biweekly Starting Salary: \$418.85
Job Number: C104

*Position: Administrative Secretary, GR18
Department: Alumni Affairs
Description: Provide secretarial support for Director of Class Affairs. Answer phone; type; file; arrange travel; assist in all aspects of program planning, eg reunion, class officer meetings; interact with Cornell alumni.

Requirements: High school diploma or equivalent; business or secretarial school desirable. Medium typing. Experience and skill in general office procedures. Good organizational and communication skills. Ability to work under pressure. Knowledge of memory typewriter and IBM PC preferred.

Minimum Biweekly Starting Salary: \$418.85
Job Number: C102

*Position: Secretary, GR17
Department: NYSSILR - Collective Bargaining, Labor Law & Labor History
Description: Provide secretarial support for three full-time faculty members. Use word processing for manuscripts, course materials, correspondence, research references and citations in the library; photocopy; handle student traffic; arrange travel; answer telephone. Other duties as assigned.

Requirements: High school diploma or equivalent. Heavy typing. Minimum two years general office experience. Familiarity with legal citations and labor relations terminology and practices. Word processing skills preferred. Shorthand desirable.

Minimum Biweekly Starting Salary: \$397.60
Job Number: C109

Position: Administrative Aide, GR23
Department: Cooperative Extension Administration - New York City (Off Campus)

Description: Provide administrative and secretarial support to the Director of Cornell Cooperative Extension in New York City. This position requires considerable independent judgment and decision making.

Requirements: Associate's degree or equivalent experience. Medium typing. Minimum of 2-3 years of administrative experience. Excellent interpersonal and organizational skills.

Minimum Biweekly Starting Salary: \$555.59
Job Number: C095

Position: Secretary, GR20
Department: Dining Services
Description: Provide secretarial/receptionist support

for the central administrative office of the Department of Dining Services. Handle communication, correspondence and calendars; greet all visitors; answer and screen phone calls; maintain office supplies; handle mail. Other duties as assigned.

Requirements: Associate's degree or equivalent. Heavy typing. Minimum 2-4 years experience. Excellent grammar, spelling and editing skills essential. High level of accuracy and efficiency essential. Micom 3000 word processor competence preferred. IBM PC helpful. Ability to work in a high pressure environment.

Minimum Biweekly Starting Salary: \$468.29
Job Number: C0917

Position: Secretary, GR20
Department: Education
Description: Provide secretarial and administrative services to the Graduate Field Representative and the Graduate Field of Education. Serve as secretary to one professor and provide back-up secretarial service for the department chair. Type; process applications; handle mail; answer phone; arrange travel; maintain calendars. Other duties as assigned.

Requirements: Associate's degree or equivalent. Medium typing. Ability to use word processor, personal computer. Excellent interpersonal and communication skills in working with 45 professors in the Graduate Field of Education and over 100 full-time students (one third are international students). Ability to organize and work independently. Confidentiality a must.

Minimum Biweekly Starting Salary: \$468.29
Job Number: C096

Position: Administrative Aide, GR20
Department: Natural Resources

Description: Responsible for secretarial and clerical activities of U.S. Cooperative Fish and Wildlife Unit. Word processing theses, reports, manuscripts; preparation of budget materials for research proposals; receptionist duties; scheduling appointments; coordinate meetings; arrange travel for unit staff (3) and support personnel (20).

Requirements: Associate's degree or equivalent. Heavy typing. Minimum 3-5 years working in a busy office. Good grammar, punctuation and editing skills. Excellent communication and organizational skills. Ability to work with a diverse public. Knowledge of University and government accounting and procurement procedures essential.

Minimum Biweekly Starting Salary: \$468.29
Job Number: C0915

Position: Secretary, GR19
Department: International Agriculture

Description: Provide secretarial and administrative support for the Project Director, Associate Director, faculty working on the Water Management Synthesis II Project. Type proposals, manuscripts, etc.; screen phone calls; handle mail; schedule meetings. Make travel arrangements. Other duties as assigned.

Requirements: Associate's degree or equivalent. Heavy typing. Minimum of 3-5 years experience in University or government environment. Excellent interpersonal skills essential (to deal with USAID, Washington, international project stations, faculty from various universities). Strong organizational skills. Ability to work independently. Experience with word processors and/or computers essential.

Minimum Biweekly Starting Salary: \$443.78
Job Number: C0912

Position: Secretary, GR18
Department: International Student Office

Description: Serve as office receptionist and provide secretarial support for several staff members. Refer foreign students to appropriate staff members for assistance; type; word processing using IBM PC; file. Other duties as assigned.

Requirements: H.S. diploma or equivalent. Business or secretarial school preferred. Medium typing. Experience in dealing with public. Ability to work under pressure and with many interruptions.

Minimum Biweekly Starting Salary: \$418.85
Job Number: C094

Position: Word Processor Operator, GR18
Department: Facilities Engineering

Description: Transcribe, type, edit and modify documents through use of a word processor or typewriter in an efficient, effective and timely manner.

Requirements: H.S. diploma or equivalent. Business or secretarial school desirable. Heavy typing. Minimum two years experience with word processing equipment, Xerox 860 preferred. Demonstrated organizational skills.

Minimum Biweekly Starting Salary: \$418.85
Job Number: C093

Position: Secretary, GR18
Department: Education

Description: Provide secretarial services to the Director of the Rural Schools Program. Type correspondence, monthly newsletter; collate materials for meetings and conferences; keep records on membership fees; repetitive letters; subscriber's lists and other materials are typed on the word processor or the IBM computer.

Requirements: H.S. diploma or equivalent. Secretarial school desirable. Medium typing. Familiarity with word processor, IBM computer. Excellent organizational, interpersonal and communication skills essential.

Minimum Biweekly Starting Salary: \$418.85
Job Number: C097

Position: Secretary, GR18
Department: Law School

Description: Provide secretarial support for law faculty. Use word processor for typing briefs, correspondence, class materials; xerox; file; prepare travel vouchers; research references and citations in the law library; answer telephone; prepare masters for duplications and use in classroom.

Requirements: H.S. diploma or equivalent. Secretarial school desirable; heavy typing. Experience with WordPerfect word processing software and/or desire to learn. Some office experience.

Minimum Biweekly Starting Salary: \$418.85
Job Number: C099

Position: Data Entry Operator, GR17
Department: Facilities Engineering

Description: Provide support to the Facilities Inventory office by maintaining occupancy and use data for Cornell's 500 facilities; enter and edit data for the Facilities Inventory computer system. Other duties as assigned.

Requirements: H.S. diploma or equivalent. Medium typing. Experience in data processing and entry (mainframe and microcomputer). Experience with IBM PC and Apple Macintosh desired. Ability to organize and manage detailed information with a very low error rate. Ability to organize and work under pressure and meet deadlines. Excellent interpersonal skills.

Minimum Biweekly Starting Salary: \$397.60
Job Number: C092

Position: Office Assistant, GR16
Department: Administrative Operations - Olin Library

Description: Primary function is to prepare invoices for payment manually and through an automated fund accounting system (IBM XT). Input data; maintain files; prepare deposits; answer telephone; convert foreign currency to U.S. dollars. Other duties as assigned. Mon. - Thurs., 8:00 a.m. - 4:30 p.m.; Fridays 8:00 a.m. - 3:30 p.m.

Requirements: H.S. diploma or equivalent. Light typing. Experience with basic business office duties including the use of office machines. Data entry experience desirable. High degree of concentration and accuracy a must. Math aptitude.

Minimum Biweekly Starting Salary: \$378.73
Job Number: C914

Position: Office Assistant, GR16

Department: General Stores
Description: Write memo issue tickets from mail-in orders; make bank deposits; monitor rental charges for storage space; file; answer phone; expedite recording defective material; keep gas cylinder records. Other clerical duties as assigned.

Requirements or equivalent. Light typing. Minimum; 1-3 years business experience. General accounting. Data entry background desired. Excellent organizational, interpersonal and communication skills.

Minimum Biweekly Starting Salary: \$378.73
Job Number: C0913

General Service

*Position: Shift & Maintenance Mechanic, SO23 (Two positions)

Department: Maintenance & Service Operations - Endowed

Description: Maintain and trouble shoot steam, hotwater, and glycol heating systems. Work on ventilation and air-conditioning system, electrical and other systems as applied to industrial, educational, research and commercial buildings. Days and hours will vary according to shift duty.

Requirements: High school diploma or equivalent. Considerable experience in building trades as described above. Must be in good health - able to work swing shift, able to climb and work from ladders, able to read blue prints. NYS Drivers license required.

Minimum Starting Salary: \$7.19/hour
Job Numbers: G102, G103

*Position: Groundswoker, SO18
Department: Physical Education & Athletics -Endowed

Description: Maintenance of all Athletic Department equipment and playing areas including the preparation of these areas for intercollegiate events, physical education classes and intramural activities.

Requirements: High school diploma or equivalent. NYS drivers license required. Experience or training in turfgrass maintenance and an above average proficiency in the repair, maintenance and handling of turfgrass equipment required, prefer candidates have knowledge of athletic events and set-ups. Must be able to lift 100 lbs.

Minimum Starting Salary: \$5.41/hour
Job Number: G108

*Position: Groundswoker, SO18
Department: Physical Education & Athletics -Endowed

Description: Mowing, seeding, fertilizing, irrigation of green and tees to specifications; change pin placements, rake traps and perform tree maintenance. Work on athletic fields such as mowing, seeding, fertilizing and marking out various athletic fields (football, soccer, field hockey and lacrosse). Maintain all athletic related equipment (sleds, baskets, goals). Set-up and take down for athletic events; general clean up afterwards.

Requirements: High school diploma or equivalent. NYS Class 5 drivers license required. Previous experience with natural turf maintenance required; working knowledge of power equipment pertaining to the game of golf. Must be able to lift 100 lbs.

Minimum Starting Salary: \$5.41/hour
Job Number: G109

*Position: Groundswoker, SO18 (Two positions)
Department: Grounds Department - Endowed

Description: Perform general landscape maintenance and construction tasks on campus grounds. Operate motorized turf tractors, mowers, snow plows, and trucks. May be assigned other groundswokers and seasonal help. Monday - Thursday, 7:00am -3:30pm; Friday 7:00am - 2:30pm.

Requirements: High school diploma or equivalent; coursework in ornamental horticulture, agronomy and/or arboriculture desirable. Field experience in landscape maintenance, landscape contracting and construction, grounds equipment operation, application of pesticides, and equipment repair desirable; knowledge of landscape maintenance skills and techniques preferred. Valid NYS driver's license required. Must be flexible as to hours and shift changes and be available for 24 hour call. Must be able to lift 100 lbs; pre-employment physical required. Employees are encouraged to apply by March 20, 1986.

Minimum Starting Salary: \$5.41—hour
Job Number: G104, G105

*Position: Animal Technician, GR18
Department: Veterinary Microbiology - James A. Baker Institute for Animal Health.

Description: Provide care (feed, water, clean and monitor) for small research animals (canines & rodents) following strict protocols for sterile or disease control environments and regulations for animal welfare. Weekend and holiday work required.

Requirements: High school diploma or equivalent. Experience with a variety of laboratory animals and animal breeding preferred. ALAS Certification helpful. Pre-employment physical required. Must be able to lift up to 100 lbs.

Minimum Biweekly Starting Salary: \$418.85
Job Number: G101

*Position: Custodian, SO16
Department: Buildings Care - Endowed

Description: Provide general maintenance and custodial care of buildings and grounds in immediate vicinity of assigned area. Monday - Thursday, 6:00am - 2:30pm; Friday 6:00am -1:30pm.

Requirements: Ability to use a variety of heavy power operated equipment, 50 lbs.
Minimum Starting Salary: \$4.84/hour
Job Number: G106

Technical

Outside applicants for technical positions should submit an employment application, resume, transcripts and a list of laboratory techniques and equipment, or computer languages and hardware with which you are familiar. This information will be kept active for six months. For each position that you are qualified and wish to be a candidate for, submit a cover letter, including position title, department and job number, to Cynthia. Current Cornell employees should submit an employee transfer application, resume and cover letter. Outside applicants with training and/or experience in the following areas are encouraged to apply: biochemistry, chemistry, microbiology, electronics, physics and licensed animal health technicians.

*Position: Computer Operator II, GR22
Department: Cornell Computer Services, Academic Computing

Description: Operate all mainframe and/or minicomputer equipment and all peripherals within a terminal facility; answer basic questions based on a working knowledge of IBM 3081, DEC2065. As well as answer routine questions based on hardware within the terminal facility. Monday - Friday, 7:30am -4:00pm.

Requirements: Associate's degree or equivalent in computing. 1 year of related experience, preferably at Cornell. Working knowledge of Cornell's computer systems including major revisions of packages supported by CCS. Good interpersonal, communications skills and organizational skills. Strong computer background. Apply by March 28, 1986.

Minimum Biweekly Starting Salary: \$524.21
Job Number: T106

*Position: Technician, GR22
Department: Agricultural Engineering

Description: Provide technical support in the examination of the kinetics of apple pomace conversion to soluble products. Design and construct models; conduct and analyze experiments; prepare reports based on experimental work; interface computer systems for data storage and analysis; use and maintain analytical equipment; maintain the laboratory.

Requirements: Bachelor's degree or equivalent experience in engineering or related sciences. One year's experience in wet chemistry analysis, operation of gas chromatography instruments, solids analysis, automatic scales, and complex laboratory equipment; use of computer data storage and analysis; some experience in conducting biological experiments with bacteria preferred. Apply by March 28, 1986.

Minimum Biweekly Starting Salary: \$524.21
Job Number: T103

*Position: Technician, GR21
Department: Veterinary Medical Teaching Hospital

Description: Perform diagnostic tests in hematology, cytology, coprology, urinalysis, microbiology, and chemistry sections of Clinical Pathology laboratory. Operate and maintain equipment pertinent to each section. Participate in an on-call coverage system for off hours and holiday emergency testing. Use computer for specimen accession, date entry and information retrieval. Monday - Friday, 3:00pm - 11:00pm.

Requirements: Associate's degree in medical technology required. Bachelor's degree in medical technology, ASCP certification preferred. One year's experience in clinical laboratory with emphasis on hematology and—microbiology preferred.

Minimum Biweekly Starting Salary: \$497.40
Job Number: T104

*Position: Research Equipment Technician, GR20
Department: Biomedical Electronics Service

Description: Repair, maintain and build electronic and electro-mechanical equipment and apparatus used in veterinary medical research, clinical and teaching applications.

Requirements: Associate's degree with some specialized training in electronics or equivalent as well as some electro-mechanical background. 1-2 years of experience in electronic troubleshooting. Good working knowledge of machine shop equipment. Ability to get along well with a wide variety of people. Experience working for a service organization.

Minimum Biweekly salary: \$468.29
Job Number: T107

*Position: Technician, GR19
Department: Food Science

Description: Perform a variety of microbiological and chemical techniques on milk and dairy products collected from public school cafeterias, supermarkets and processing plants. Visit schools to monitor quality of product offered for sale and assist in improving milk handling practices which affect quality.

Requirements: Bachelor's degree or combination of education and experience with dairy products and laboratory analysis. Experience with basic lab equipment such as pH meters, autoclaves, incubators, spectrophotometers. Familiarity with dairy chemistry and dairy microbiology helpful. Some experience with computers useful. Apply by March 28, 1986.

Minimum Biweekly Starting Salary: \$443.78
Job Number: T102

*Position: Research Assistant I
Department: Boyce Thompson Institute - Contact department directly (See Below)

Description: Insect Virology Laboratory: Perform experiments involving recombinant DNA, DNA extractions, nucleic acid hybridizations, protein synthesis and construction of plasmid vectors. Responsible for maintaining tissue culture cells, preparing bacterial and tissue culture media and supervising a lab technician.

Requirements: Bachelor of Science degree or equivalent experience. Lab experience, particularly in molecular biology, desirable.

Minimum Starting Salary: \$11,600
Contact: Dr. Alan Wood or Dr. John Burand, Boyce Thompson Institute, 257-2030

Position: Production Controller, GR21
Department: Computer Services

Description: Insure a timely and efficient flow of assigned work through the main computer systems, and maintain quality and accuracy in meeting the Administrative Data Processing schedules. Full-time, regular, shift work and some weekends.

Requirements: Associate's degree in data processing or equivalent experience. Some related operations experience helpful. HS CL, CMS preferred. Please send cover letter and resume to Cynthia Smithbower by March 21, 1986.

Minimum Biweekly Starting Salary: \$497.40
Job Number: T091

Position: Technician, GR21
Department: Plant Pathology - Geneva, NY (Off-Campus)

Description: Responsible for the daily operations of a monoclonal antibody laboratory. Maintain animal colony, immunize mice, prepare cell lines and screen them for appropriate antibody production.

Requirements: Bachelor's degree or equivalent in biology or relevant field. Some experience and—training with immunological/animal cell culture techniques is desirable. Previous experience in a monoclonal antibody laboratory would be useful. Attention to detail is essential.

Minimum Biweekly Starting Salary: \$497.40
Job Number: T093

Position: Technician, GR21
Department: Plant Pathology - Geneva, NY (Off-Campus)

Description: Assist in research on Agrobacterium tumefaciens involving DNA isolation and genetic analysis of the bacterium. DNA hybridization probes will be constructed and utilized for characterizing strains. Plant callus tissue will be analyzed for unique amino acids (opines).

Requirements: Bachelor's degree in biology, microbiology or plant science. Understanding of molecular biology techniques with some experience is preferred.

Minimum Biweekly Starting Salary: \$497.40
Job Number: T094

Position: Technician, GR22 (Repost)
Department: Pharmacology

Description: Carry out experiments relating to research into diarrheal disease. Duties include preparing solutions, animal handling (usually rodents) analyzing samples, calculating data and preparing graphical representation of results; use a variety of scientific equipment.

Requirements: Bachelor's degree or equivalent in biochemistry or a similar subject. Two to three years laboratory experience. Familiarity with basic statistics.

Minimum Biweekly Starting Salary: \$524.21
Job Number: T251

Position: Technician, GR18
Department: Equine Drug Testing & Research

Description: Maintain inventories of chemicals and supplies; package and ship supplies and samples; transport samples and materials via car in local area; coordinate service on program vehicles; assist in horse care; samples collection and general lab care.

Requirements: Associate's degree in chemistry or equivalent knowledge of chemicals. Valid driver's license. Experience with stock room procedures preferred. Safe driving record necessary.

Minimum Biweekly Starting Salary: \$418.85
Job Number: T083

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The Week in Sports

Tourney Time for Winter Teams; Spring Squads Open

By JOHN HERON
Sports Information

Two spring sports teams are in action this week, but two other squads keep the interest going on the winter campaign after earning trips to post-season competition this weekend.

The men's tennis team will compete in the only home events of the coming week. The Red will face Penn State at noon Saturday and then entertain Boston University at 10 a.m. Sunday. Both contests will be held at the Kite Hill Bubble. The men's lacrosse team will face an early season challenge with an away match against Adelphi at 2 p.m. Saturday.

The men's hockey team and women's gymnastics team both turned in fine performances last weekend to advance to ECAC championship action. The Big Red men's skaters will travel to Boston for the conference tournament, where they will play Yale in the semifinal round at 6 p.m. Friday in the Boston Garden. The winner will play the winner of the Harvard-Clarkson contest for the championship at 8:30 p.m. Saturday, while the losing squads will meet in the consolation game at 6 p.m.

The women gymnasts will be at the University of New Hampshire Saturday for the ECAC championships. Cornell finished fourth in the six-

team tournament in 1985-86.

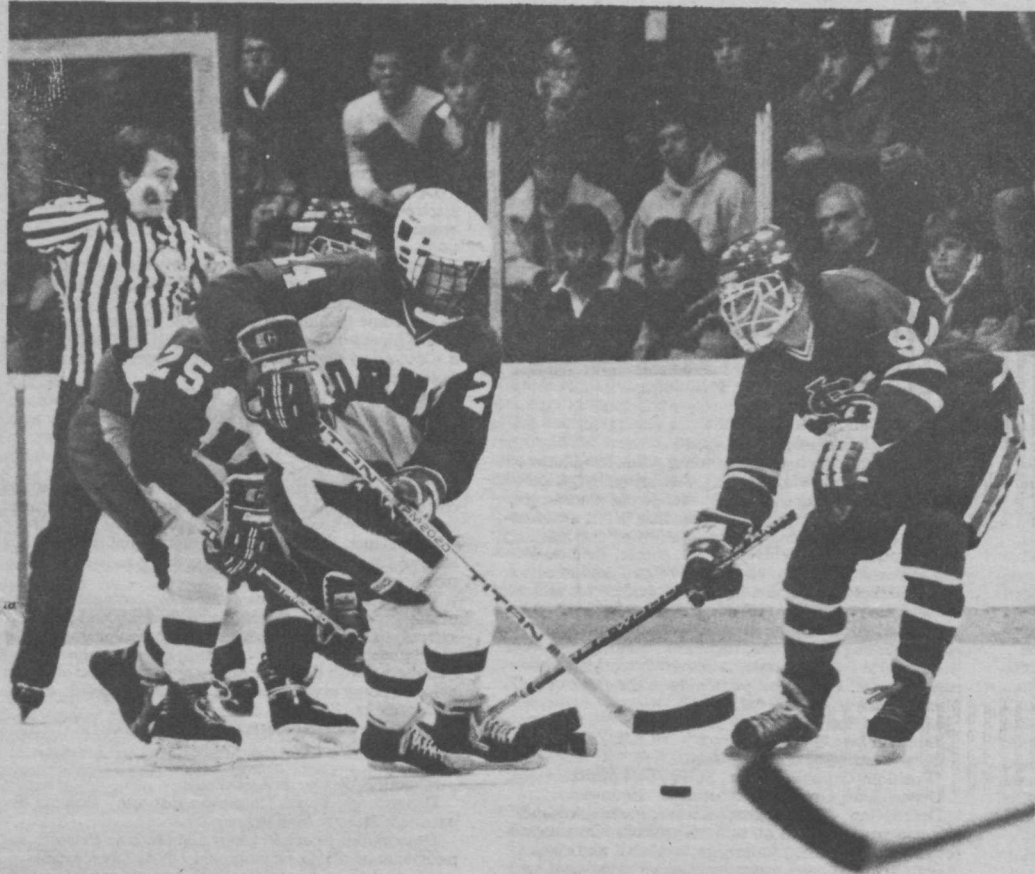
For the second straight year, the Big Red skaters will return to Boston for the final four of the ECAC playoffs. Cornell, which lost to eventual conference and national champion RPI in the semis last year, will be facing the Elis for the fourth time this season. Yale won the most recent encounter, a 5-4 overtime victory on Feb. 21 at Lynah Rink, which is Cornell's last loss (the Red is unbeaten over the last five games).

The men's lacrosse team, which opened its season Tuesday against Cortland, will be trying to avenge last season's 12-8 loss to Adelphi. Cornell is the 10th-ranked team in the nation according to Lacrosse magazine's pre-season coaches poll. The Big Red leads the series with Adelphi 7-3, but it has dropped two straight to the Panthers. Adelphi took a 13-8 decision in Garden City two years ago.

In scoring a 170.70-166.30 victory over Northeastern last weekend, the Big Red women's gymnastics team topped the 170-point barrier for the third straight meet. More importantly, the strong team effort enabled Cornell to secure a spot in the ECAC championships. Senior Lisa Stroud closed her dual meet career in fine fashion, winning her second straight uneven bars competition with an 8.8. Likewise, junior Pam Andrellos had an 8.75 to win on balance beam for the second consecutive meet. Sophomore Jeanne Pitts continued to dominate the all-around. She won the event with 34.60 points, the fourth time she has bettered 34 points in the event this year. Pitts also placed second on vault and uneven bars, while taking third on floor exercise. Sophomore Carolyn Boos was second in the all-around and third on uneven bars.

After posting an 11-8 record in 1985, the men's tennis team looks to improve upon last season's success with a solid core of veterans. Leading the way will be senior captain James Connolly, who was 10-9 at third singles a year ago. Sophomore Bruce Jervis and junior Eric Cruz should move into the No. 2 and 3 spots, respectively. Jervis compiled an 11-8 mark a year ago, while Cruz recorded an impressive 12-7 slate. Two newcomers, Tony Giorgetti and Joe Tustin, will see action at both singles and doubles, as will returnee Brian Siff and sophomore Chris Foley.

The Red has won nine of the previous 10 meetings against the Nittany Lions, including last season's 6-3 triumph. Sunday's match against Boston University is the first meeting ever between the two schools.



Dave Shippel, who has scored a number of game-winning goals for the hockey team this season, will be looking for more in the ECAC tournament in the Boston Garden this weekend.



Eric Cruz, a junior, is one of veteran members of this year's tennis team, which has two matches at home this weekend.

Brief Reports

'Cagney and Lacey' Show Focus of Women's Lecture

Julie D'Acci, a lecturer in the Department of Communication Arts at the University of Wisconsin, will speak on "Women and Prime Time Television: The Case of Cagney and Lacey" at 4:30 p.m. today in 165 McGraw Hall.

D'Acci specializes in feminist cultural criticism and focuses on television and the mass media. At the University of Wisconsin, she

teaches both cultural theory and television production. She spent six months in Hollywood on the set of "Cagney and Lacey" in order to develop the case study she will share during her presentation.

Her talk is sponsored by the Women's Studies Program and the Women's Center.

Improving Public Contact Skills Topic of Program

Improving public contact skills is the topic of a special lunch-hour program to be offered from 12:15 to 1:15 p.m. Wednesday,

March 26, in Hollis Cornell Auditorium of Goldwin-Smith Hall.

Targeted toward those who work in "high contact" areas, who handle questions, or respond to requests or complaints, the program is intended as a brief introduction to the personal characteristics and professional skills needed to deal with the public effectively.

Presented by Randal Simonetti of the AT&T training staff, the program is free and open to all Cornell staff.

Bloodmobile Will Visit Willard Straight Monday

The American Red Cross Bloodmobile will visit Willard Straight Hall from 10 a.m. to 3:45 p.m. Monday, March 17.

To make an appointment to give blood, call the Red Cross at 273-1900. In addition, walk-ins will be accepted at WSH Monday.

The visit will be sponsored by Alpha Phi Omega service fraternity.

Job Opportunities

Continued from Page 11

Part-time

*Position: Office Assistant, GR18
Department: Rural Sociology
Description: Assist Leadership Institute Director in making local workshop arrangements. Process materials for use in leadership workshops and other activities of the Institute; prepare mailing lists; direct mail campaign; type; develop and maintain files and other records; record meeting minutes. Other duties as assigned. Monday - Friday, 8:00 a.m. - 12:00 noon, until June, 1987.

Requirements: H.S. diploma or equivalent; business or secretarial school desirable. Minimum 1-2 years of secretarial experience preferred. Some skill in use of word processor preferred.

Minimum Biweekly Starting Salary: \$214.80
Job Number: C101

Position: Secretary, GR18
Department: Alumni Affairs
Description: Assist Administrative Manager with correspondence; receptionist; answer phones for office; assist with other alumni affairs programs as needed. Monday - Friday 20 hours per week/4 hours per day, flexible.
Requirements: H.S. diploma or equivalent. Medium typing. Some office experience. Excellent written and oral communication skills.

Minimum Biweekly Starting Salary: \$214.80
Job Number: C0911

Position: Secretary, GR17
Department: Operations Research and Industrial Engineering

Description: Assist faculty with their journal responsibilities. Type; file; Xerox copy work; answer phones; provide back-up for other support staff. Other duties as assigned. Monday - Friday, 8:00 a.m. - 12:00 noon

Requirements: H.S. diploma or equivalent. Business or secretarial school preferred. Medium typing. Minimum 1-2 years secretarial experience. Microcomputer familiarity very helpful. Excellent interpersonal skills.

Minimum Biweekly Starting Salary: \$204.00
Job Number: C0910

Position: Accounts Assistant, GR17

Department: Natural Resources
Description: Provide accounting assistance in departmental business office. Responsible for preparation of documentation to expedite payments; prepare billings; maintain accounting files; act as receptionist for business office; answer telephones, etc. Monday - Friday, 4 hours/day.

Requirements: H.S. diploma or equivalent. State accounting knowledge helpful. Some office experience.

Minimum Biweekly Starting Salary: \$204.00
Job Number: C0916

Temporary

TEMPORARY OPPORTUNITIES: Individuals qualified for temporary work in the following areas are encouraged to apply: clerical, secretarial, word processing. If you have experience or skills in these or related areas and are interested in learning more about these opportunities, please call Laurie Worsell at 256-5226.

*Position: Temporary Data Analyst
Department: Cornell Institute for Social and Economic Research (CISER)

Description: Provide support to the CISER Survey Research Facility relating to the operations for survey research projects. Assist in the training and overseeing of students and part-time employees performing interviews and data entry/entry/coding as needed. Shift supervisor on telephone surveys. 20-30 hours per week for three months, with possible extension.

Requirements: Bachelor's degree in social science or equivalent experience. Demonstrated ability and experience in project coordination. Experience with data entry and data management applications on mainframe or microcomputers; knowledge of social research and survey research methods desirable; basic knowledge of quantitative methods and statistical analysis. Requires good organizational skills and attention to detail, good typing skills. Willing to work nights and weekends if needed. Submit cover letter and resume to Cynthia Smithbower by March 28, 1986.

Minimum Starting Salary: \$7.50/hour
Job Number: T105

*Position: Temporary Computer Operator
Department: School of Hotel Administration

Description: Provide technical assistance for hardware and software on the WANG computer to approximately 45 users. Perform routine mainframe computer operations and system maintenance such as back-ups and reports. Respond to phone inquiries on technical support and routine activities. Monday - Friday 9:00 a.m. - 3:00 p.m. (20-25 hours per week) until September 1, 1986.

Requirements: Knowledge of routine maintenance for computers, including troubleshooting, preventive maintenance and set-up. Knowledge of word processing and concepts is desirable. Send letter and resume to Cynthia Smithbower by March 28, 1986.

Minimum Starting Salary: \$6.00/hour
Job Number: T108

*Position: Temporary Gardener (Two positions)
Department: Cornell Plantations

Description: Assist in the planting and maintenance of the botanical gardens of Cornell Plantations. Activities involve primarily site preparation and planting, and are physically demanding. 7:00 a.m. - 3:30 p.m. Monday - Friday, starting when weather permits. 8 month position.

Requirements: Two year degree with major in horticulture or nursery management or equivalent gardening, or landscaping experience considered mandatory. Ability to identify a wide range of both herbaceous and woody plants, and familiarity with their cultural requirements desirable. NYS driver's license required, ability to lift 100 lbs. Apply in person at the East Hill Plaza Employment Office, 9:00 a.m. - 12:00 noon daily, by March 24, 1986.

Minimum Starting Salary: \$4.00—hour (includes benefits)
Job Number: G1010

Academic

Please contact department directly.

Position: Assistant Professor, Mammalian Developmental Genetics
Department: Section of Genetics and Developmental Biology
Contact: Professor A.W. Blackler
Job Number: A091

Position: Professor and Chairperson
Department: Clinical Sciences - College of Veterinary Medicine
Contact: Dr. R.M. Lewis, DVM, Chairman, Search Committee, NYS College of Veterinary Medicine, Cornell University, Ithaca, NY 14853
Job Number: A092

Position: Slavic Studies Librarian (Assistant or Senior Librarian)
Department: Cornell University Libraries
Contact: Carolyn A. Pyhtila, Personnel Director, Olin Library, Cornell University, Ithaca, NY 14853
Job Number: A093

Position: Extension Associate, Regional Farm Business Management Specialist, Chemung, Tompkins, Tioga, Schuyler Counties
Department: Cornell Cooperative Extension
Contact: John H. Potter, Cooperative Extension, Roberts Hall
Job Number: A094

Position: Research Associate II
Department: Plant Pathology - Geneva, NY
Contact: Dr. Roger Pearson, Plant Pathology, NYS Agricultural Experiment Station, Geneva, NY 14456
Job Number: A095