

Cornell Chronicle

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New Polymer Program Gets \$2 Million Grant from IBM

By ROGER SEGELKEN

A new polymer science research and training program has been established in Cornell's Department of Chemistry with a \$2 million grant from IBM Corp.

Cornell is one of 12 American universities chosen by IBM from more than 100 to receive cash and equipment grants for research and curriculum development programs in the emerging field of materials and processing sciences.

Some \$1 million in analysis and computing equipment and \$1 million in cash for faculty and researcher support will be supplied by IBM over the next five years to launch Cor-

nell's development program in polymer science.

Polymers are both naturally occurring and synthetic substances, with complex structures of giant molecules. They are built of smaller molecules in repeating patterns. All proteins are polymers, as are man-made materials ranging from the graphite in "lead" pencils to consumer plastics to automobile bumpers.

Nylon and polyester fibers are among the most familiar examples of polymeric materials. Polymers also are used in chemical reactions to separate reagents, in medical applications for synthetic skin grafts, sutures,

and as biodegradable agents for delivering drugs. Many materials important to the electronics, computer, and communications industries are polymers.

"We believe basic research in materials and processing is critical to the future of the information industry at large," said IBM Vice President and Chief Scientist Lewis Branscomb in announcing the program awards.

"This funding is designed to stimulate additional scientific investigation in these areas. It also will help develop a pool of trained people from which both universities and industry can draw."

At least half of all chemistry and chemical engineering graduates of American universities are engaged in polymer research and development for industry, according to planners of the new Cornell program.

Applied research and teaching in polymer science at Cornell is concentrated in the fields of materials science and engineering, chemical engineering, and textiles and apparel, with 15 graduate and undergraduate courses offered. Cornell's chemistry department, which now offers one course in polymer science, will use the IBM grant to add undergraduate and graduate-level courses.

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Oil Cartel to Force Prices Back Up, Expert Here Says

By JOSEPH SCHWARTZ

The collapse of world oil prices is fueling the stock market, slashing inflation rates, and pinching the price of gasoline at the pump. But is also laying the groundwork for the resurgence of a world oil cartel — and eventually, petroleum prices will go back to where they were a few months ago or higher, a Cornell energy expert predicts.

"Oil prices could remain stable for as long as 10 years, given the deteriorated status of the Organization of Petroleum Exporting Countries. Once OPEC recovers, however, the price of oil will at least double," says Duane Chapman, a professor of resource economics in the College of Agriculture and Life Sciences.

Chapman, a nationally recognized authority on energy economics, specializes in public policy as it relates to energy production and use. He has testified before state and U.S. Senate and House committee hearings on the financial structure of the petroleum industry, among other issues.

In recent months, OPEC's stranglehold on the world petroleum market has loosened dramatically as a result of increased oil production in non-OPEC countries and the introduction of worldwide energy conservation measures.

"Those two factors helped reduce oil prices by shifting the world's petroleum market from a monopoly controlled by OPEC to an open, competitive situation," Chapman points out.

The current price of oil on the spot market — newly-produced oil that is not spoken for by long-term contracts — is below \$15 per barrel. In 1985, the spot market price for oil hovered near \$30.

While world petroleum prices remain low, industrialized countries such as the United States will increase their consumption of oil, gasoline, and other petroleum products, Chapman says. Lower oil prices also will decrease the incentive to explore for new oil sources.

"Those factors are slowly restoring the economic clout of OPEC, whose member countries have more than half of the world's oil reserves," Chapman notes. "OPEC will become an effective cartel again when non-OPEC sources of oil begin to deteriorate after 10 or 15 years."

"At current rates of oil consumption, OPEC's reserves would last at least a century," he says.

Today, there are 700 billion barrels of oil in proven world oil reserves. OPEC coun-

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Judge Rules City Permit Is Needed For Stone Demolition to Continue

A state supreme court judge has ruled that the State University Construction Fund should seek a permit from the City of Ithaca for demolition of Stone Hall. Construction of Academic I cannot proceed without Stone Hall being razed.

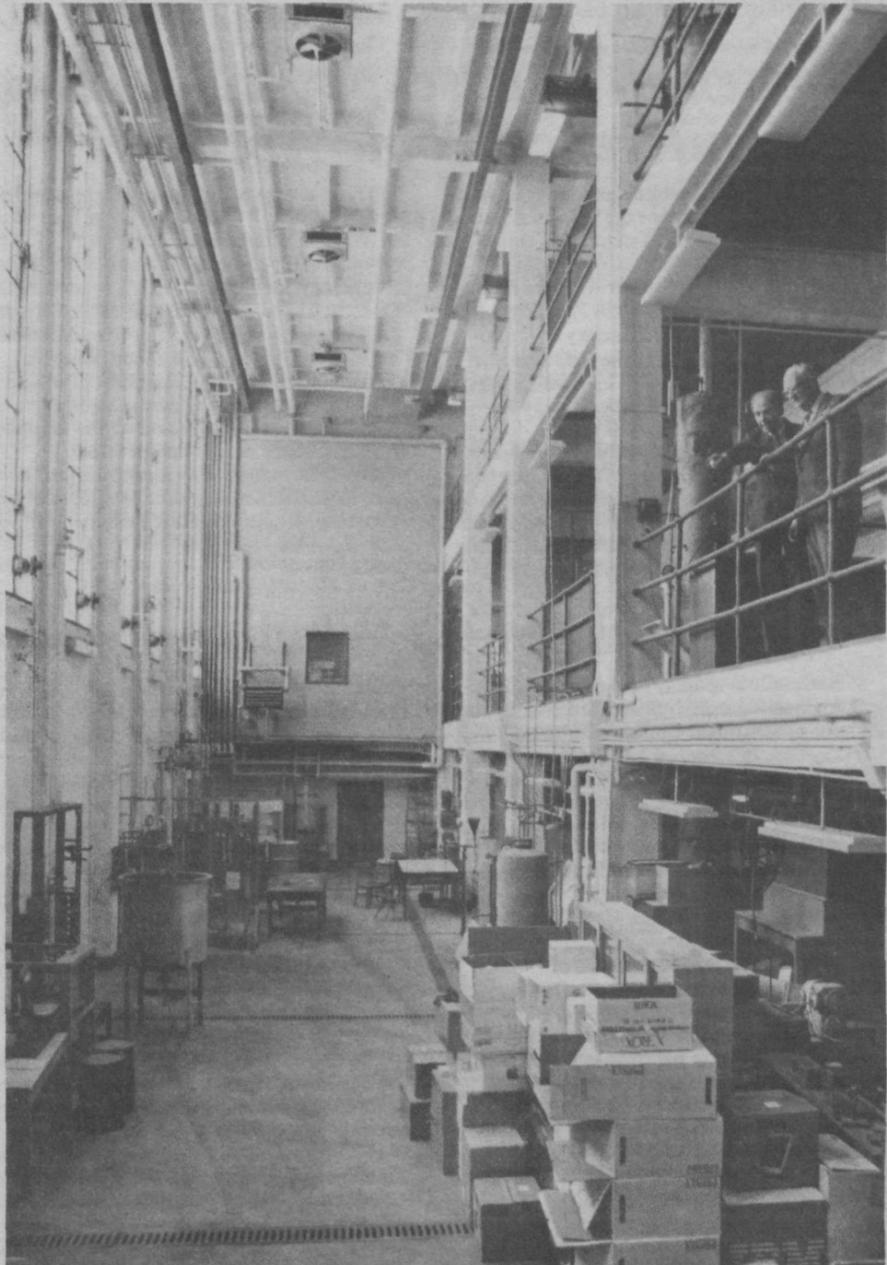
In announcing his decision, Judge Robert F. Doran granted a preliminary injunction that prevents further demolition of Stone Hall "until such time as the local ordinance of the City of Ithaca is complied with."

At the same time, the judge dismissed two claims by Historic Ithaca that SUCF violated the New York Historic Preservation Act and the State Environmental Quality Review Act. "It is the court's conclusion that the determination (by SUCF) that Stone Hall was

to be demolished was not illegal, arbitrary, capricious, or an abuse of discretion," the judge wrote in his five-page decision signed March 19.

An attorney for SUCF said Wednesday an appeal is being planned. John F. Burness, vice president for university relations at Cornell, said the university had received its copy of the judge's decision late Tuesday afternoon, and university officials had not yet had an opportunity to fully assess the decision.

Arguments in the case were heard Feb. 21 in New York State Supreme Court in Albany, and additional briefs were submitted the following week.



Renovations to Olin Hall will turn the cavernous "high bay" area into three floors of laboratories and offices, School of Chemical Engineering Director Keith E. Gubbins, left, tells professor of chemical engineering Julian C. Smith. (Story on page 7.)

Protozoa Found to Delay Bacterial Attack on Sewage Pollutants

By YONG H. KIM

When it comes to sewage treatment, the process of eliminating pollutants depends largely on bacteria because these microbes turn many kinds of organic pollutants into innocuous products, but there is a serious hitch.

Microscopic one-celled animals called protozoa that also thrive in sewage act like a fox in a chicken coop, devouring the bacteria and halting the bacterial action on pollutants for several days, according to scientists here.

That may explain why some of the pollutants go untreated at municipal treatment facilities during the initial stage of treatment — something that has intrigued scientists for a long time, says Bruce A. Wiggins, a graduate student in environmental microbiology in the College of Agriculture and Life Sciences.

"We found that the real culprit was the protozoa, not the bacteria," Wiggins said.

This discovery provides a better understanding of what really goes on among microorganisms thriving in sewage. More important, it could help bacteria "digest" certain types of pollutants without the interference from the protozoa. That, in turn,

A Fox in the Chicken Coop

could speed up the microbial treatment of pollutants.

Wiggins was scheduled to report the finding today at the annual meeting of the American Society for Microbiology, now in session at the Washington, D.C. Convention Center.

Wastewater from domestic, industrial, and other sources is a hotbed for all types of microorganisms competing with each other for survival. The protozoa and bacteria are among the creatures that make up the world of microscopic organisms in sewage. Larger than bacteria, the protozoa are highly mobile and capable of swimming rapidly through the water in which they live. Several types of single-celled animals, including amoebae, make up this particular group.

"Protozoa have long been known to eat bacteria," Wiggins explained. "What's new here is the discovery that these animals can affect the activities of the bacteria known to break down certain kinds of chemical pollutants in sewage."

In a series of experiments, Wiggins found that those protozoa in effect "bushwack" the bacteria before those bacteria have the chance to go into action.

Wiggins said that the protozoa bring about a wholesale destruction of bacteria, thus stopping the bacterial action needed to degrade sewage contaminants. As a result, the treatment of pollutants is delayed for as long as a week or more.

To stop this carnage, the Cornell researchers killed off the protozoa by using antibiotics designed specifically to zero in on only those animals. Once the protozoa were wiped out, the bacteria became active without any delay.

"The killing of the protozoa made it possible for those bacteria to attack pollutants within a day," Wiggins said.

In his experiments, Wiggins used two types of antibiotics to eliminate the protozoa so as to protect the bacteria known to break down the weed-killer 2,4-D and a partially degraded product of the insecticide para-

athion. Both chemicals are used widely for pest control.

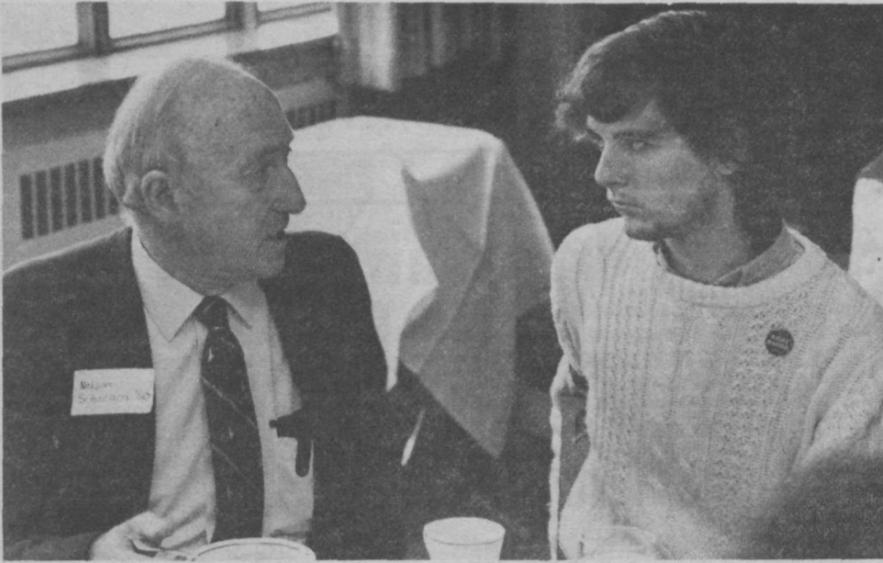
If left to nature's devices, the protozoa prey on bacteria for several days, and then they die out, probably because there are not many bacteria left to eat. A few surviving bacteria, however, multiply quickly and go to work on pollutants.

Will the Cornell findings have applications for treatment of sewage contaminants on a large scale?

The Cornell researchers aren't sure at this stage because more research is needed to determine whether the killing of the protozoa is practical in the real-world situation.

"Our research findings certainly point in that direction," said Cornell microbiologist Martin Alexander, who directed Wiggins' research. "There is a possibility of speeding up the biological treatment of pollutants in sewage by eliminating the time-consuming acclimation period."

One dilemma facing the researchers, though, is that the protozoa are also beneficial because they make it easier to remove all unwanted microorganisms from treated sewage.



Forty students and nearly 20 university trustees met for breakfast Friday, March 21, to discuss a wide range of issues in individual discussions. Among those participating were Nelson Schaefer Jr., chairman of the Executive Committee of the Board of Trustees, and Brett Beeman, a leader of the divestment protest on campus.

Women in Landscape Architecture Conference Topic April 12

The Landscape Architecture Program here will sponsor a conference on "Women Landscape Architects in the Twentieth Century," April 12.

To be held in conjunction with the annual spring meeting of the upstate New York chapter of the American Society of Landscape Architects (ASLA), the conference will take place in Sibley Hall. The event is sponsored jointly by Cornell's Landscape Architecture Program and ASLA.

Open to all landscape architects and interested members of the general public, the conference will examine the accomplishments of women landscape architects who practiced in New York and other Northeast states during the early part of the 20th century.

Those whose work will be featured include Ellen Shipman, who is known as the "Dean of Women Landscape Architects;" Marjorie Sewell Cautley, the designer of the innovative Sunnyside Gardens housing project in Queens; Helen E. Bullard, a 1918 Cornell graduate who helped design the 1939 New York World's Fair, and other renowned leaders in the landscape architecture field.

A highlight of the program will be the announcement of the winners of the annual ASLA student design competition.

For information about registration, contact Rose Tucker, Landscape Architecture Program, Room 230 East Roberts Hall, or call 255-4487.

Charles C. Winding

Charles C. Winding, professor of chemical engineering emeritus and director of the School of Chemical Engineering from 1957 to 1970, died Monday, March 17, in Tompkins Community Hospital. He was 77.

A pioneer in polymer technology and a member of the faculty since 1935, Winding was instrumental in development of the School of Chemical Engineering. He worked with the school's founder, Fred H. Rhodes, and during his own terms as director to design curricula, attract faculty and establish the current teaching and research facility, Olin Hall.

He retired in 1975 as the Herbert Fisk Johnson Professor of Industrial Chemistry. Professor Winding completed his under-

graduate work and doctorate at the University of Minnesota, and served during World War II as a consultant to the Office of Rubber Reserve. He was named an assistant professor in 1941, associate professor in 1941, and full professor in 1944. He served as assistant director of the school from 1947 to 1957.

He remained active in national professional organizations after his retirement.

Winding was a member of the American Chemical Society, a fellow of the American Institute of Chemical Engineers, and a member of the American Institute of Chemistry. In 1983, he was named Educator of the Year by the Society of Plastics Engineers.

The Charles C. Winding Scholarship Fund was established in 1973 to provide assistance to students in the Master of Engineering program.

Memorial donations to that fund may be made in care of Keith E. Gubbins, director, School of Chemical Engineering.

Colle New Chairman, Communication Arts

Royal D. Colle, professor of communication arts, has been appointed chairman of the Department of Communication Arts through Sept. 30, 1988.

A member of the faculty in the College of Agriculture and Life Sciences since 1966, Colle focuses his professional activities on planning communication systems and developing communication strategy for rural development and non-formal education, in-

cluding programs related to agriculture, health, nutrition, and family planning.

His research activities focus on strategies for communicating with rural people and the use of paraprofessionals in the delivery of basic services. He is the director of Cornell's Communication Planning and Strategy Training Program designed for third world officials working in development.

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PEOPLE

Hardy Named President of BTI

Ralph W. F. Hardy, one of the nation's leading scientists in the field of life sciences and an authority on biotechnology, has been named president and chief executive officer of the Boyce Thompson Institute for Plant Research here.

Hardy will assume his new duties Sept. 1, 1986, succeeding Roy A. Young, who has served as managing director of BTI since 1980. Young and his wife plan to return to Oregon, where he was associated with Oregon State University for many years.

Hardy is the fifth chief executive officer of the research institute. Established in 1924 in Yonkers, the institute moved to Cornell in 1978. Recognized worldwide as a leading research organization of its kind, BTI is dedicated to the improvement of food and fiber production and to the maintenance of environmental quality. BTI concentrates its research efforts entirely on plants, focusing on four primary program areas — biological control, environmental biology, nitrogen and crop yields, and plant stress.

Christian C. Hohenlohe, chairman of the BTI board of directors, said: "The directors are extremely pleased that Ralph Hardy agreed to join the Boyce Thompson Institute as president. He brings a wealth of rich experience to his new post. He is a proven administrator and a highly successful business executive; he also has the academic credentials and professional interest to effectively guide the plant research activities on which the in-

stitute has developed its international reputation."

Hohenlohe also announced the change in title from managing director to president. He explained, "The directors felt that since the institute is a private, independent, not-for-profit corporation, assigning the title of president to the chief executive officer would certainly be in keeping with recognized business practices. Further, the title of president more accurately reflects the broad scope and heavy responsibility of managing this major research enterprise, which employs a staff of 130 and operates with an annual budget of almost \$8 million."

Hardy comes to BTI from BioTechnica International, a Massachusetts-based biotechnology firm; he was president and chief operating officer of the firm until Feb. 28, 1986. He holds the position of deputy chairman of the company, as well as chairman of BioTechnica Diagnostics, and is a member of the Board of Directors of BioTechnica International of Canada.

In addition, he has served as a visiting professor of life sciences in the College of Agriculture and Life Sciences at Cornell during the past two years. He is a leading authority on nitrogen fixation and plant microbiology. He has published more than 100 scholarly articles in leading scientific journals and is co-author of the text "Biochemistry and Biophysics of N₂ Fixation" (1975). He also is editor of the multivolume "Treatise on Dinitrogen Fixation," which appeared between 1977 and 1980.

Before he joined BioTechnica, Hardy was a member of the R & D staff at E. I. du Pont de Nemours & Co. for 21 years.



HARDY

Campbell Associate Dean of Vet

Dr. S. Gordon Campbell has been named associate dean for academic affairs at the College of Veterinary Medicine.

Campbell will direct those affairs that affect students and veterinary medical education at the college including admissions, fi-

nancial aid, graduate studies and continuing education.

Born in Argyle, Scotland, Campbell began his academic career at Glasgow University, earning the B.V.M.S. and a M.R.C.V.S. between 1951 and 1956.

Bing Wins State Horticulture Gold Medal

Arthur Bing, a professor emeritus of floriculture and ornamental horticulture, is the winner of the New York State Gold Medal of Horticulture, given jointly by the New York State Department of Agriculture and Markets and the New York State Nurserymen's Association.

He will receive the award in a ceremony during this year's State Fair in Syracuse. In recognition of his contributions to the horti-

culture industry, his name will be inscribed in the "Horticulture Court of Honor" at the State Fairgrounds.

Known nationally, Bing is an authority on control of weeds affecting a wide range of nursery and greenhouse crops, as well as turfgrass. His studies have provided the basis for Cornell's weed control recommendations for these crops.

Husa to Get Honorary Degree at I.C.

Ithaca College will award an honorary Doctor of Music degree to Cornell and Ithaca faculty member and Pulitzer Prize-winning composer Karel Husa during the 1986 Commencement ceremonies in May.

The honorary degree was approved by the Ithaca College Board of Trustees in February. A resolution passed by the board said, "Professor Husa will retire from the faculty at the end of the 1985-86 academic year, ending a teaching career during which this internationally renowned composer and educator touched the lives of many Ithaca students with his creative genius."

"Karel has made an enormous contribution to the School of Music and the College," says Interim Dean Art Ostrander. "The exceptional quality of his composition has brought distinction to the institution, while his dedication, skill and compassion as a teacher have afforded our students and faculty the immeasurable benefit of working closely with an artist of the first order."

In 1954 Husa was appointed to the faculty at Cornell, where he is currently the Kappa Alpha Professor of Music. He began lecturing at Ithaca College in 1967.

Boyce Thompson Institute Promotes Two Scientists

Robert G. Amundson and Robert J. Kohut in the Boyce Thompson Institute for Plant Research have been promoted to the rank of assistant research scientist.

A plant physiologist, Amundson focuses his research on the effect of air pollutants on plants in terms of uptake of pollutants, foliar energy, plant growth, and yield, among other factors.

Kohut, on the BTI staff since 1980, is an

expert on the effects of air pollution on plants, including agricultural crops. Over the past several years, he has served as leader of a major project assessing the yield and loss of economically important agricultural crops. Known as the "National Crop Loss Assessment Network," the project is sponsored by the U.S. Environmental Protection Agency.

O'Connor Heads Vet Equine Extension

Dr. Marie O'Connor has been appointed senior veterinary extension associate with the New York State Diagnostic Laboratory at the College of Veterinary Medicine, the first position of its kind in the history of the college. She will have special responsibility for equine extension work throughout the state, working closely with equine practitioners and the New York State horse industry on the control of equine disease, man-

agement problems, and the maintenance and improvement of their horses.

According to Dr. Donald Lein, associate director of the Diagnostic Laboratory, Dr. O'Connor's appointment has been anticipated not only by equine practitioners, but by horseowners, the racing industry, and breeders as well. As the equine liaison for the veterinary and agricultural colleges at Cornell, she will facilitate access to the university's resources. Dr. O'Connor is experienced in management, equine health programs, training programs for personnel, research, and international equine trade, transport and health regulations.



O'Connor
industry on the control of equine disease, man-



ANDREW YOUNG ELLEN GOODMAN

Andrew Young, Ellen Goodman Speak Tuesday

Atlanta Mayor Andrew Young and nationally syndicated journalist Ellen Goodman are scheduled to lecture at Cornell Tuesday, April 3.

Young, former U.S. Ambassador to the United Nations, will lecture on the "State of the World (Its Misery and Danger, Its Hope and Opportunity)" as part of a four-day symposium on "The Survival and Enhancement of Our World Community." The symposium is being sponsored by the Interreligious International Ministry program of Cornell United Religious Work, and other groups.

Goodman, a 1980 Pulitzer Prize winner who is based at the Boston Globe, will discuss "A Matter of Values: Men, Women, and Social Change" in a lecture sponsored by Cornell's Women's Studies Program.

Young will speak at 8:30 p.m. in Bailey Hall. His lecture is open to the public free of charge. Goodman will speak at 7 p.m. in Statler Auditorium. All tickets for Goodman's lecture have been distributed.

Young, who became Mayor of Atlanta in 1982, was U.S. Ambassador to the United Nations during the Carter Administration, when he also served as a member of the cabinet and the National Security Council. He helped negotiate independence for Zimbabwe, formerly Rhodesia, as a special presidential envoy.

A clergyman and civil rights leader, Young worked closely with Martin Luther King Jr. and helped write the Civil Rights Act of 1964 and the Voting Rights Act of 1965.

Young's talk will be the keynote address for the symposium on world community. The symposium will feature workshops on education, ecology, politics, religion, peace and war, and other topics to help build understanding and a sense of the world as a community.

Other presenters include Karan Singh, a member of the Indian Parliament, who will discuss "An East-West Approach to World Education" as part of a workshop at 9 a.m. Friday, April 4, in Anabel Taylor Hall auditorium.

Economist Hazel Henderson, who coined the phrase "think globally, act locally," will discuss "Toward a Post Economic World View" at 8:15 p.m. Friday in Anabel Taylor Auditorium.

Goodman's talk on "A Matter of Values: Men, Women, and Social Change" is part of a year-long lecture series sponsored by the Women's Studies Program. Previous speakers in the series included 1984 vice presidential candidate Geraldine Ferraro and former U.S. Representative and Brooklyn district attorney Elizabeth Holtzman.

Goodman has been writing a column for the Boston Globe since 1971. The Washington Post Writers Group began syndicating her column five years later. Her "At Large" column appears in 325 newspapers nationwide.

"I follow, like a scorekeeper, the conflicts and ambivalences of our lives," Goodman once noted. "We have seen women strike down the '50s Supermom myth only to find themselves stuck with the '80s Superwoman myth ... We have watched people press for equal rights and be granted, instead, equal responsibilities. If I carry a placard at all, it says simply: 'Wait a minute, it's not as simple as that.'"

Goodman has had three collections of her columns published as books, as well as a book on social change called "Turning Points."

"Ellen Goodman's syndicated columns have done a great deal to advance understanding of women's perspectives on contemporary social policy issues and on matters of social and economic equity," said Joan Jacobs Brumberg, director of Cornell's Women's Studies Program.

TRUSTEE ACTIONS

\$38.2 Million in Construction Approved

Cornell Trustees have approved a \$32.5 million budget for construction of a central facility for the Cornell Biotechnology Program.

Meeting on campus Friday (March 21), the trustees also approved budgets for an addition to the Space Sciences building and for renovations to the former Comstock Hall, now the Computing and Communications Center.

Construction of the biotechnology center is set to begin this spring, according to Robert M. Matyas, vice president for facilities and business operations. The five-story building, to be located on a portion of lower Alumni Field adjacent to Dale R. Corson, Seeley G. Mudd, and Comstock halls, will provide a central facility for educational and research programs in molecular and cellular sciences. The 100,000-square-foot structure will include laboratories and offices.

Funding for the two-year construction project includes \$18 million from the State of New York, \$2 million from the New York State Urban Development Corporation, and \$12.5 million financed through series 1985 bonds issued by the New York State Dormi-

tory Authority.

The Cornell Biotechnology Program, which includes the Biotechnology Institute and the New York State Center for Advanced Technology for Biotechnology (Agriculture), was established in 1983. It now operates from laboratories throughout the Ithaca campus. The program is funded by grants from the New York State Science and Technology Foundation, by its corporate sponsors (Eastman Kodak, General Foods, and Union Carbide), and by research grants from federal and other agencies.

The \$3.7 million Space Sciences project, set to begin this summer, involves adding two floors to the four-story building that is home to the Department of Astronomy, a leader in astrophysical research. The addition, which will provide 16,600 square feet of space for computers, laboratories, and offices, an increase of about 45 percent, is slated for completion in fall 1987.

Since the space sciences building was constructed 18 years ago, the number of faculty, students, and research scientists in the building has more than doubled and projections indicate continued growth, Vice President

Matyas told the university's trustees. The original structure was designed to accommodate two additional floors, he said.

Financing for the project includes \$1.68 million in series 1985 New York State Dormitory Authority Bonds, and more than \$2 million in gifts.

The budget for the third project, renovations to the Computing and Communications Center, is being increased from \$6 million to \$8 million. Most of that increase is related to putting a third floor on the addition to the former Comstock Hall. Originally, a two-story addition had been planned, Matyas explained to trustees.

The addition to the building has been completed; the renovation phase, now under way, is expected to be completed late this year. Some renovations to the basement and first floor of Caldwell Hall also are included in this project.

Funding of the budget increase is being financed through series 1984 and series 1985 New York State Dormitory Authority Bonds. The total project also has received \$3.4 million in gifts and grants.

\$23.8 Million in Research Funding to Be Sought

Research funding proposals totalling \$23.8 million for biotechnology, geology, and computing have been approved for submission to granting agencies by Cornell's Board of Trustees.

Meeting Friday (March 21) in Ithaca, the trustees authorized:

— a \$13,820,000 funding proposal from the Cornell Biotechnology Program to the Army Research Office to operate a Center for Excellence in Biotechnology;

— a \$7,015,034 proposal from the Consortium for Continental Reflection Profiling (COCORP) to the National Science Foundation to continue seismic reflection surveys through 1988; and

— a \$3 million proposal from the Center for Theory and Simulation in Science and Engineering to the National Science Foundation to expand Cornell's supercomputer program.

All three proposals are requests for federal government funding, and will not necessarily result in the award of the requested amounts, Provost Robert Barker noted.

The proposal to the Army Research Office seeks designation as a national center for excellence, beginning in summer 1986, with first year funding of about \$2.3 million. It would supplement research programs already operating through the Cornell Biotechnology Program's two components, the industry-funded Biotechnology Institute and the New York State-funded Center for Advanced Technology in Biotechnology (Agriculture). New federal funding would be used for unclassified, basic (rather than applied) research of the type currently conducted in the Biotechnology Program, which focuses on genetics and cell biology in plants and animals.

National Science Foundation funding to

COCORP would operate the Seismic Reflection Profiling of the Continental Basement program for two more years, beginning October 1986. Current federal funding to COCORP is \$3 million a year. The program also receives corporate support through an industrial affiliates program. Now operating in Arizona, COCORP has completed some 7,600 kilometers of surveys throughout the United States.

Cornell's Theory Center, one of five national supercomputer centers designated and funded in 1985 by the National Science Foundation, is seeking an additional \$3 million to provide remote facilities for on-campus and off-campus users and to expand the memory of the production supercomputer facility. In addition to federal and state government funding, the Theory Center receives support from two computer manufacturers, IBM Corp. and Floating Point Systems.

Increases in Tuition (9.5%) and Financial Aid (17%)

Tuition in Cornell's private schools and colleges will increase 9.5 percent to \$11,500 for 1986-87. The new tuition rate is included in a budget approved by the Board of Trustees Friday (March 21).

The budget also includes a 17 percent increase in funding for financial aid.

"The tuition increase reflects an effort to balance the need for revenue to retain outstanding faculty and maintain academic programs with the need to compete for a high-quality, diverse student body," Provost Robert Barker told the trustees.

Cornell's tuition will be among the lowest in the Ivy League, he added. "When tuition, room, and board are included for a total cost of \$15,325 a year, Cornell will continue to be the least expensive of the Ivy schools."

Tuition at the Law School will increase 8.6 percent to \$11,760 and tuition in the Johnson Graduate School of Management will increase 9 percent to \$12,100.

Cornell trustees approved a proposal to increase undergraduate tuition in the state-supported units by 6.7 percent to \$4,650 for New York State residents, and by 9.2 percent to \$8,100 for non-residents.

Graduate tuition in the state units would increase by 7.6 percent to \$5,400, under the proposal, while tuition at the College of Vet-

erinary Medicine would increase 4.1 percent to \$7,700 for New York State residents and 4.5 percent to \$9,220 for non-residents.

Tuitions for the statutory units at Cornell are established separately, after consultation with the State University of New York.

Student dining contracts will increase an average of 5.2 percent; housing contracts will go up 7.2 percent. A dining contract for three meals per day, seven days per week will cost \$1,725; the average charge per student in a double room will be about \$2,100.

The general purpose budget approved today includes support for Cornell's private units and central service offices in Ithaca for the 1986-87 academic year.

The budget, at \$187.5 million, represents a \$14.2 million or 8.2 percent increase above the current year.

Other budget provisions include: — Funds from the general purpose budget for financial aid will increase nearly 17 percent to \$12.5 million. Total university support for financial aid, including the general purpose budget and other programs, will top \$18 million.

— The average self-help contribution from undergraduate students to their financial aid packages will increase 3.7 percent to \$4,820. This money is provided through aca-

demic-year jobs and loans.

— The summer savings contribution from freshmen to their financial aid packages will remain \$1,050; the average expectation for upper classmen will increase 3.6 percent to \$1,450, with the lowest increase for sophomores and the highest increase for seniors.

— There will be a 4.5 percent increase in the faculty-staff salary pool for cost-of-living and merit-based raises. An additional 0.5 percent increase will be allocated for promotions, extraordinary merit, and to promote equity within colleges or units.

— The stipends for graduate assistants will increase 7.1 percent to \$6,000 for first-year assistants in 1986-87; second-year graduate assistants will receive \$6,150.

— General operating expenses will be held steady at \$28.3 million, including only a \$100,000 increase to meet unavoidable expense increases, such as higher insurance premiums.

The general purpose budget "does not address many items that are important to the quality of academic programs and services," Barker told the trustees. A conditional budget of additional items that could be supported if revenues exceed expectations will be presented to trustees in May.

'Aid-Blind' Admissions Continue Through 1987-88

Cornell will continue to admit qualified students for next year without considering their ability to pay tuition and other costs.

Cornell's Board of Trustees, meeting Friday (March 21) on campus, approved continuing the university's aid-blind admission policy through 1987-88. In addition, the university will continue to assist families in meeting their educational costs through a combination of sources, including employment, loans, grants, and scholarships.

"Cornell will continue its commitment to excellence and diversity in the student population," according to the financial aid policy adopted by the trustees.

Projections for 1987-88 show that the need for financial aid will exceed available funds by about \$1.9 million, Susan H. Murphy, dean of admissions and financial aid, said.

But increases in New York State's Tuition Assistance Program, increased fund-raising activities by the university, higher student wages, and supplemental loans to parents from New York State and Cornell will meet the \$1.9 million shortfall, Murphy added.

For the past 11 years, Cornell has made its admissions decisions without considering an applicant's financial need and has developed individual aid packages to meet student needs. One year ago, facing a projected shortfall in financial aid funds, Cornell named a 26-member commission to study undergraduate financial aid.

Last November, the commission recommended that Cornell continue admitting students without considering their financial need and factor inflation into all elements of

financial aid packages, among other steps. The commission's 40-page report has been reviewed by the board's academic affairs committee, and is scheduled for further discussion at the trustee meeting in May.

Among the changes being considered are a longer summer break, higher student wages, and a separate endowment for financial aid funds.

"The combination of an increasing student need and decreasing federal support requires Cornell to reexamine its financial aid programs," Murphy said.

"Our goal is to maintain diversity by ensuring access to a Cornell education," Murphy told the trustees. "One of the best ways to do that is to continue a strong and effective financial aid program."

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 Apgar, 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

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), collettown. Emotions Anonymous is a self-help group for people with living or emotional problems. Everyone is welcome.

Transformation Workshops

Two eight-week workshop series with Let Davidson, Ph.D. — "Making Relationships Work," on creating loving and satisfying relationships, for individuals and couples, every Tuesday, 7-10:30 p.m. beginning April 8; "Personal Effectiveness Seminar," on building qualities for maximum effectiveness in daily living, every Thursday, 7-10 p.m. beginning April 10. For information and registration, call 272-4131.

Alternatives Library

Apartheid in South Africa: Read about the issues at the Alternatives Library in Anabel Taylor Hall. Up-to-date and informative books and periodicals available. Free and open to the public.

Dance

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 the Council of the Creative and Performing Arts.

Cornell Jitterbug Club

Fun! 7:30-9:30 p.m. every Wednesday in the Anabel Taylor Edwards Room. Instruction. For more information call Jim at 255-5034 or 257-4692.

Contra/Square Dance

Beginners welcome. Participants are encouraged to play along with the musicians who will provide written sheet music. Instruction and dancing will begin at 7:30 p.m. and will continue until 10 p.m. Admission is \$1 at the door. The dance will be held in the Willard Straight Hall Memorial Room. Sponsored by the Willard Straight Hall Arts Project.

Cornell Folk Dancers

The Cornell Folk Dancers are sponsoring a weekend workshop of Rumanian Folkdances taught by Nicholas Hilferink, April 5 and 6 in the Memorial Room of Willard Straight Hall. For information call 257-3156.

Exhibits

Herbert F. Johnson Museum

"Masters of Contemporary Art in Poland," Apr. 2 through May 18. 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.

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.

Films

Unless otherwise noted films are sponsored by Cornell Cinema.

Thursday

Mar. 27, 8 p.m. *Uris Hall Auditorium. "Marine" (1964), directed by Alfred Hitchcock with Tippi Hedren and Sean Connery.

Friday

Mar. 28, 7:15 p.m. *Uris Hall Auditorium. "Comfort and Joy" (1984), directed by Bill Forsyth with Bill Paterson and Eleanor David.

Mar. 28, 9:30 p.m. *Uris Hall Auditorium. "The Bridge Over the River Kwai" (1957), directed by David Lean with Sir Alec Guinness and William Holden.

Saturday

Mar. 29, 7:15 p.m. *Uris Hall Auditorium. "Comfort and Joy."

Mar. 29, 9:30 p.m. *Uris Hall Auditorium. "The Bridge Over the River Kwai."

Sunday

Mar. 30, 2 p.m. Johnson Museum Lecture Room. "Niagara Falls," with guest speaker Professor Michael Walsh.

Mar. 30, 8 p.m. *Uris Hall Auditorium. "The Misfits" (1961), directed by John Huston with Clark Gable and Marilyn Monroe.

Monday

Mar. 31, 4 p.m. 310 Uris Library. "An Indian Pilgrimage: Kashi"; "An Indian Pilgrimage:

Ramdevra." South Asia Film Series. Sponsored by the South Asia Program.

Mar. 31, 9 p.m. *Uris Hall Auditorium. "The Chant of Jimmie Blacksmith" (1977), directed by Fred Schezisi.

Tuesday

Apr. 1, 4:30 p.m. Uris Library Media Center, Room 310. "Misunderstanding China," (1972), a Charles Kuralt CBS TV-News special on the history of Western misconceptions about China and the Chinese, made at the time of Nixon's first trip to China. Sponsored by the Southeast Asia Program.

Apr. 1, 4:30 p.m. Uris Hall Auditorium. "Under the Bridge" (1984), Bai Chen. Sponsored by the China-Japan Program.

Apr. 1, 7:30 p.m. *Uris Hall Auditorium. "The Clockmaker," (1976); "Let Joy Reign Supreme," (1975), directed by Bertrand Tavernier with Philippe Noiret. Co-sponsored with Romance Studies.

Wednesday

Apr. 2, 4:30 p.m. Uris Hall Auditorium. "Merry Christmas, Mr. Lawrence" (1983), Nagisa Oshima. Sponsored by the China-Japan Program. Co-sponsored by Cornell Cinema and the Society for the Humanities.

Apr. 2, 8 p.m. *Uris Hall Auditorium. Guest filmmakers Greta Schiller and Andrea Weiss present "Before Stonewall," (1984), documentary. Co-sponsored by GayPAC and Noyes Center.

Thursday

Apr. 3, 4 p.m. 301 Uris Library. "The Jewel in the Crown, Part 9: The Towers of Silence." South Asia Video Series. Sponsored by the South Asia Program.

Friday

Apr. 4, 9:45 p.m. *Uris Hall Auditorium. "Jagged Edge," (1985), directed by Richard Marquand with Glenn Close and Jeff Bridges.

Apr. 4, Midnight. *Uris Hall Auditorium. "Return to Waterloo," (1985), directed by Ray Davies with Ken Colley and Valerie Holliman.

Saturday

Apr. 5, 7:30 p.m. *Uris Hall Auditorium. "Jagged Edge."

Apr. 5, 9:45 p.m. *Uris Hall Auditorium. "Dreamchild," (1985), directed by Gavin Millar with Coral Brown, Ian Holm, and Amelia Shankley.

Apr. 5, Midnight. *Uris Hall Auditorium. "Smithereens," (1982), directed by Susan Seidelman with Susan Berman, Brad Rinn, and Richard Hell.

Sunday

Apr. 6, 2 p.m. *Johnson Museum Lecture Room. Guest filmmaker Nan Goldin presents "The Ballad of Sexual Dependency," (1985).

Apr. 6, 8 p.m. *Uris Hall Auditorium. "Cafe Flesh," (1982), directed by Rinse Dream with Rinse Dream and Herbert W. Day.

Lectures

Tuesday

Apr. 1, 4 p.m. 213 Ives Hall. "Becoming Internationally Aware—A Personal Career Path and Corporate Perspective," Joseph Keithley, Keithly Instruments, Inc. Sponsored by Comparative Studies in Professionalism and Professional Education and the Center for International Studies.

Apr. 1, 4:30 p.m. 374 Rockefeller Hall. "Chinese Communist Party and Secret Societies," Professor Cai Shaoqing, Luce Scholar, Henry M. Jackson School of International Studies, Professor of History, Nanjing University, People's Republic of China. Lecture is in Chinese with an interpreter. Sponsored by the China-Japan Program.

Wednesday

Apr. 2, 4 p.m. Africana Studies and Research Center. "Questions of Regional Economic and Political Cooperation in Southern Africa," Dr. James Mphahisha, Visiting Fulbright Scholar, University of Zambia. Sponsored by Forum Africana.

Apr. 2, 4 p.m. 100 Caldwell Hall. "Planning of Investigations: Some Statistical Considerations," Sir David Cox of the Imperial College of Science & Technology, London and A.D. White Professor-at-Large.

Apr. 2, 4:30 p.m. 205 Thurston Hall. "Chaotic Behavior in the Solar System," Jack Wisdom, Professor of Astrophysics, Massachusetts Institute of Technology. Sponsored by the Dept. of Theoretical and Applied Mechanics, College of Engineering.

Apr. 2, 4:30 p.m. 156 Goldwin Smith. "Tragedy and Ritual," Patricia Easterling, Fellow, Newnham College, Cambridge, England. Sponsored by the Department of Classics.

Apr. 2, 4:30 p.m. 120 Ives Hall. "Borges in Action: A Narrative Homage," reading by Carlos Fuentes, Senior Fellow, Society for the Humanities. Sponsored by the Society for the Humanities.

Apr. 2, 4:30 p.m. N-207 Martha Van Rensselaer Hall. "Food, Diet and Health: A Manifesto. A Call for the Rethinking of the Scientific Basis of Food Safety Policy in the United States," Dr. Sanford Miller, Director, Bureau of Food, Food and Drug Administration. Sponsored by the Association of Students in Environmental Toxicology, the Institute of Comparative and Environmental Toxicology, Division of Nutritional Sciences, Department of Food Science, and the Graduate Activities Funding Commission.

Apr. 2, 4:35 p.m. 165 McGraw Hall. Women's Studies Spring 1986 Lecture Series, "Natural and Unnatural Woman," Elizabeth Kamarck Minnich, Philosophy, Graduate School of the Union of Experimenting College and Universities. Co-sponsored by the Program in the History & Philosophy of Science and Technology.

Thursday

Apr. 3, 12:15 p.m. A.D. White House 201. "Indian Nationalism, a Bengali Short Story of Tagore," Gayatri Spivak, Senior Fellow, Society for the Humanities. Sponsored by the South Asia Program.

Apr. 3, 3 p.m. 701 Clark Hall. Continuing semi-

nar series, The Farm Crisis and the Future of the Family Farm, "International Markets and National Policies: Why American Farmers Bear Unfair Burdens," Dr. Raymond Hopkins, Professor of Political Science, Swarthmore College. Funded by the W.K. Kellogg Foundation and co-sponsored by Biology & Society, Science, Technology and Society Program, the International Political Economy Program and the Departments of Rural Sociology and Government.

Apr. 3, 4:30 p.m. Goldwin Smith Hollis Cornell Auditorium. "Islamic Fundamentalism and International Relations," Bernard Lewis, Professor of Near Eastern Studies, Princeton University, A.D. White Professor-at-Large.

Apr. 3, 7 p.m. Statler Auditorium. Women's Studies Spring 1986 Lecture Series, "A Matter of Values: Men, Women & Social Change," Ellen Goodman, Nationally Syndicated Columnist, Boston Globe. 1980 Pulitzer Prize. Sponsored by the Women's Studies Program.

Apr. 3, 7:30 p.m. G-1 Stimson. "Report from San Ignacio: 1986 Status of the California Grey Whale," Dr. John Heisser. Sponsored by Jordani. Funded in part by the Student Finance Commission.

Apr. 3, 8:30 p.m. Bailey Hall. Keynote Address—"State of the World (Its Misery and Danger, Its Hope and Opportunity)," The Honorable Andrew Young, Mayor of Atlanta and Former U.S. Ambassador to the United Nations. Sponsored by the Center for World Community on World University Campuses.

Friday

Apr. 4, 12 p.m. 250 Caldwell. Lecture V of a six-lecture series on historic and contemporary issues affecting the American Indian; Introduction to contemporary Iroquois artists in New York State (and Canada), including videotapes, Susan Shedd, Art/Historian formerly with the Herbert F. Johnson Museum of Art. Sponsored by the Outreach Component of the American Indian Program.

Apr. 4, 12:15 p.m. Africana Studies and Research Center, Hoyt Fuller Room. Brown Bag Lunch. "Racist Distortions of European Historiography," Martin Bernal, Department of Government. Sponsored by the Africana Studies and Research Center.

Apr. 4, 12:15 p.m. 360 Uris Hall. Brown Bag Lunch. "Images of Latin America in East German Drama," Arlene Teraoka, German, Princeton University. Sponsored by the Western Societies Program.

Music

Wednesday

Apr. 2, 8 p.m. Anabel Taylor Auditorium. Festival of India Concert, Hariprasad Chaurasia, flutist. Sponsored by the South Asia Program, the Society for the Humanities, and the National Festival of India.

Apr. 11, 8:15 p.m. Sage Chapel. Nothing But Treble presents "Spring Forward," directed by Susan Davenny Wyner.

Religious Events

Catholic

Holy Thursday

Mar. 27, 7:30 p.m. Anabel Taylor Hall Chapel. Evening Mass of the Lord's Supper. Good Friday

Mar. 28, 3 p.m. Anabel Taylor Hall Chapel. Liturgy of the Passion and Death of Christ. Easter Vigil

Mar. 29, 8 p.m. Anabel Taylor Hall Chapel. Solemn First Mass of Easter. Easter Day

Mar. 30, 10 a.m. Anabel Taylor Hall Chapel. Mass. Sunday

Mar. 30, 11 a.m. Sage Chapel. Speaker: Robert L. Johnson, Director, Cornell United Religious Work. Sunday

Apr. 6, 11 a.m. Sage Chapel. Speaker: Gail Riina, Assistant Director, Cornell United Religious Work.

Religious Services

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 Cha-

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An untitled 1975 watercolor by Henryk Stankiewicz, "Contemporary Art in Poland" which will be on display from April 2 through May 18. It consists of contemporary artists and emphasizes (Photograph by Emil Ghinger)

pel. 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.

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.

Archaeology: "Backed Blades and Regional Differentiation in the Middle Stone Age of Southern Africa," Thomas Volman, Archaeology, and "Fishing, Farming and Social Complexity in Prehistoric Peru," Daniel Sandweiss, Anthropology, 4:40 p.m. Thursday, April 3, 305 McGraw.

Astronomy: "Contributions to the Local Gravitational Field from Beyond the Virgo Supercluster," Amos Yahil, Stony Brook, 4:30 p.m. Thursday, April 3, 105 Space Sciences.

Biochemistry, Molecular and Cell Biology: Title TBA, Marh Jane Gething, University of Texas Health Center, 12:20 p.m. Friday, April 4, 125 Riley Robb.

Biochemistry, Molecular and Cell Biology: Title TBA, Joe Sambrook, University of Texas Health Center, 4:30 p.m. Friday, April 4, 204 Stocking.

Boyc Thompson: "Incidence and Severity of Air Pollution Injury," D. C. McCune, BTI, 3:15 p.m. Wednesday, April 2, BTI Auditorium.

Chemical Engineering: "Structural Characterization and Property Estimation for Complex Mixtures," David T. Allen, Chemical Engineering, University of California, Los Angeles, 4:15 p.m. Tuesday, April 1, Olin 145(A).

Chemistry: "Logic, Psychology and Serendipity in Scientific Discovery," Heinrich Zollinger, Swiss Federal Institute of Technology, 4:40 p.m. Monday, March 31, 119 Baker Lab.

Chemistry: "A Cornucopia of New NMR Methods and Techniques," Pierre Laszlo, University of Liege, 4:40 p.m. Thursday, April 3, 119 Baker Lab.

Computer Science: "Partial Implementations of Abstract Data Types," Myla Archer, University of Illinois, 4:30 p.m. Monday, March 31, Upson 215.

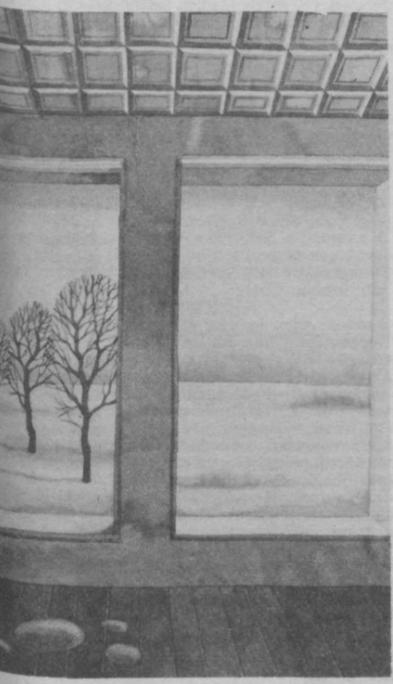
Computer Science: "A Mathematical Semantics and Theory of Raster Graphics," Eugene Fiume, University of Toronto, 4:30 p.m. Tuesday, April 1, Upson B-17.

Floriculture and Ornamental Horticulture: "Water Gardening — The Use of Water Lilies and Allied Plants in the Landscape," Charles Thomas Lilypons Water Garden and secretary of the American Water Lily Society, 12:15 p.m. Thursday, April 3, 37 Plant Science.

Food Science: "Isolation and Identification of Character-Donating Components of Tobacco," Roger Mookherjee, International Flavors and Fragrances, 4:30 p.m. Tuesday, April 1, 204 Stocking.

Geological Sciences: "Paleomagnetism of the Brooks Range, Alaska," Peter Plumley, Syracuse University, 4:30 p.m. Tuesday, April 1, 1120 Snee-

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part of an exhibition "Masters of Herbert F. Johnson Museum of Art drawings and drawings by 27 and in Poland in the last 20 years.

History and Philosophy of Science and Technology: "Natural and Unnatural Woman; The Political Uses of Explanations of Nature," Elizabeth Minnich, Philosophy, the Graduate School of the Union for Experimenting Colleges and Universities, 4:35 p.m. Wednesday, April 2, 165 McGraw.

Human Service Studies: "Action Research: Linking Practitioners and Policy-Makers," Alba Luzman-Gomez, Program for Indigenous women, Department of Public Education, Mexico, 2:15 p.m. Wednesday, April 2, Faculty Lounge, Martha van Rensselaer Hall.

Immunology and Parasitology: "How Gamma Interferon Inhibits the Growth of Toxoplasma gondii in Cultured Fibroblasts," Dr. Elmer Pfefferkorn, Medical Microbiology, Dartmouth, 4 p.m. Thursday, April 3, G-3 Veterinary Research Tower.

Immunology and Parasitology: "The Scabbard Effect: Immunoregulation in Schistosomiasis," Dr. Dan Colley, V. A. Research Career Scientist, U.S. Medical Center, Nashville, Tenn., 12:15 p.m. Friday, April 4, G-3 Veterinary Research Tower.

International Studies in Planning: "Planning for Rural Sahelian Women," Lucy Creevey, City and Regional Planning, University of Pennsylvania, 12:15 p.m. Friday, April 4, 157 East Sibley.

Materials Science and Engineering: "The Ductile-Brittle Transition: Stability of Crack Extension Rates," Edward W. Hart, Cornell, 4:30 p.m. Thursday, April 3, 140 Bard.

Mechanical and Aerospace Engineering: "Sonic Boom Focusing from Fighter Aircraft," Kenneth Plotkin, Wyle Laboratories, 4:30 p.m. Tuesday, April 1, 282 Grumman.

Natural Resources: "Ecological Recovery of St. Helens, Washington," Dr. Jerry Franklin, U.S. Forest Service, Oregon State, 12:15 p.m. Tuesday, April 1, 304 Fernow.

Pharmacology: "Calcium Channels in Planar Lipid Bilayers: Insights into the Mechanism of Ion Permeation and Gating," Robert Rosenberg, Physiology, Yale, 4:30 p.m. Monday, March 31, 101L Schurman.

Physiology: "Growth and Adaptation of the Gastrointestinal Mucosa," L. R. Johnson, University of Texas Health Center, 4:30 p.m. Tuesday, April 1, G-3 Veterinary Research Tower.

Plant Biology: "The Physical Basis of Plant Cell Growth," Daniel Cosgrove, Biology, Penn State, 11:15 a.m. Friday, April 4, 404 Plant Science.

Plant Breeding: "Genetic Manipulation of Higher Plant Plastids," Michael Moynihan, Plant Biology, Cornell, 12:20 p.m. Tuesday, April 1, 15 Emerson.

Plant Pathology: "Tomato Ribosomal RNA Gene Structure; Relevance to Viroid Replication," Keith Perry, 4:30 p.m. Tuesday, April 1, 404 Plant Science.

Plasma Studies: "30MW, 10GHz Gyrokystron for Future TeV Linear Accelerators," Prof. C. Triffler, University of Maryland, 4:30 p.m. Wednesday, April 2, 282 Grumman.

Psychology: Title TBA, Patricia Goldman-Rak, Yale University School of Medicine, 3:30 p.m. Friday, April 4, 202 Uris Hall.

Remote Sensing: "Investigations of the Hyperarid Desert Core, Western Egypt and Northern Sudan," Ted A. Maxwell, Center for Earth & Planetary Studies, Smithsonian Institution, Washington, D. C. 4:30 p.m. Wednesday, April 2, 10 Hollister.

Science, Technology and Society: "International Markets and National Policies: Why American Farmers Bear Unfair Burdens," Raymond Hopkins, Political Science, Swarthmore College, 3 p.m. Thursday, April 3, 701 Clark Hall.

South Asia Program: "Indian Nationalism: A

Bengali Short Story of Tagore," Gayatri Spivak, senior fellow, Society for the Humanities, 12:15 p.m. Thursday, April 3, A. D. White House 201.

Statistics: "Planning of Investigations: Some Statistical Considerations," Sir David Cox, Mathematics Department, Imperial College of Science and Technology, London, 4 p.m. Wednesday, April 2, 100 Caldwell Hall.

Textiles and Apparel: "Some Aspects of the Role of Water in Dyeing Processes on Various Fiber Materials," Prof. Heinrich Zollinger, Switzerland, 4:30 p.m. Tuesday, April 1, 317 Martha Van Rensselaer Hall.

Theoretical and Applied Mechanics: "Chaotic Behavior in the Solar System" Professor of Astrophysics, MIT, 4:30 p.m. Wednesday, April 2, 205 Thurston.

Vegetable Crops: "Shade Tolerance of Vegetables," Katie Van Dusen, Grad student, Veg Crops, 4:30 p.m. Thursday, April 3, 404 Plant Science.

Theatre

Shakespeare Acting Project
A communal actors' project of William Shakespeare's "All's Well that Ends Well" will open at Theatre Cornell's Drummond Lab Theatre at 8 p.m. Thursday April 24. The director, Stephen Cole, a professor of acting in the Department of Theatre Arts at Cornell University, sees this event more as an example of actor's work than as a formal presentation of a Shakespearean comedy. The production will provide an exciting and unique opportunity to witness an ensemble of actors working together to explore the possibilities of a Shakespearean text in an informal setting.

"All's Well..." is one of Shakespeare's complex "problem" comedies. It concerns issues of the social problem of high birth versus native merit and the human problem of unrequited love in an atmosphere of both dark satire and high comedy.

Performances will be on April 24-26 and May 1-3 at 8 p.m. and on April 27 and May 3 at 2:30 p.m. in the Drummond Lab Theatre in Lincoln Hall. Tickets are available at the Theatre Cornell Box Office at 101 Willard Straight Hall from 1 to 6 p.m. Mondays through Fridays, 11 a.m. to 3 p.m. Saturdays, and one hour before all performances at the theatre. Special group rates are available. For reservations and information call 255-5165.

Sunday

Mar. 30, 2:30 p.m. *Willard Straight Theatre. "Becoming Memories." Thursday-Saturday Apr. 3-5, 8 p.m. *Willard Straight Theatre. "Becoming Memories."

Graduate Bulletin

Commencement is June 1. The deadline for submitting your thesis is May 23, but if you plan to attend graduation and would like to receive your diploma on June 1 and have your name in the commencement program, stop in at the Graduate School immediately and fill out the Provisional Degree and Diploma form. That must be done before March 29.

Summer Assistantship/Fellowship applications are available in field offices and the Graduate Fellowship and Financial Aid Office. Summer Graduate School Tuition Award applications are available in the Graduate Fellowship and Financial Aid Office, 116 Sage Graduate Center. Deadline to be submitted to the Graduate School is April 11th. Applications must be completed and returned to your Graduate Faculty Representative before that date.

For more information on the fellowships listed below contact the Graduate Fellowship office or your graduate faculty representative.

April 1, 1986 is the deadline for the National Potato Council Auxiliary Scholarship Program. A scholarship of \$1000 will be provided for a graduate student whose course of study would enhance the potato industry. Final selection will be based on academic achievement, leadership abilities, and potato-related areas of study.

April 1, 1986—New York State Assembly Summer Intern Program. Summer Interns work full-time for 10 weeks on supervised research projects and receive a \$2000 stipend. New York State residents who will be college seniors or graduate students the semester following the internship may apply. Only 10 to 20 internships are awarded each summer.

April 1, 1986—Wellesley College, Peggy Howard Fellowship in Economics. To provide financial aid for Wellesley students or alumnae continuing their study of economics. Administered by the economics faculty who may name one or two recipients depending on the income available.



Reminder: March 31, 1986 is the last day you can submit a claim for reimbursement for the 1985 Select Benefits Plan year. The books are closing. Any amount you have remaining in a medical care reimbursement account or a dependent care reimbursement account not claimed before March 31, 1986 cannot be returned to you.

Profs-at-Large Cox, Lewis to Talk

Two of Cornell's Andrew D. White Professors-at-Large, Sir David Cox and Bernard Lewis, will be on campus in early April to deliver public lectures and take part in seminars and other university activities.

Sir David, an authority on statistical theory and applied probability, will discuss "Planning of Investigations: Some Statistical Considerations" in a free public lecture at 4 p.m. Wednesday, April 2, in Room 100 of Caldwell Hall.

He will be on campus March 30 through April 10 and will hold office hours in 250A Caldwell Hall to confer with students and faculty on problems of mutual interest. His telephone number will be 255-8066.

Lewis, author of more than 20 books and

noted historian on the Middle East, will give two public lectures during his stay on campus March 31 through April 11. They are:

— "Islamic Fundamentalism and International Relations," at 4:30 p.m. Thursday, April 3, in Hollis E. Cornell Auditorium of Goldwin Smith Hall;

— "The Muslim Discovery of Europe," at 4:30 p.m. Monday, April 7, in Kaufmann Auditorium of Goldwin Smith Hall.

He will conduct office hours for discussion with students and faculty on Wednesday, April 2, and Wednesday, April 9, from 2 to 3 p.m. in Room 386 of Rockefeller Hall. The telephone number for appointments is 255-6275.

Opera to Have Premiere at Cornell

Theatre Cornell and The Cornell Council for the Creative and Performing Arts will present the world premiere of the new opera "Mysteries of Eleusis" here this spring.

This production was written by Guggenheim Fellow Joel Feigin and will be directed by David Feldshuh, artistic director of Theatre Cornell. The musical director is Fred Cohen. Performances will be on Wednesday, April 23, and Friday, April 25, at 8 p.m. and Sunday, April 27, at 2:30 p.m. at the Willard Straight Theatre.

The work is an American opera which explores the Demeter and Persephone myth and will be backed by a 27-piece orchestra, eight principle singers, a singing chorus of 18, and a speaking chorus. Featured in the role of Demeter will be Christine Schadeberg, a soprano who made her Carnegie Hall debut last year. Mimmi Fulmer, also a soprano, will play Persephone while Edward Bogusz, a bass from the Cincinnati opera, will

play Hades. Also featured are Greg Mercer, a tenor from New York, Andrea Abushady, a mezzo-soprano from New York, and Patrice Pastore, a mezzo-soprano from Ithaca.

Feldshuh says, "This project signals an important decision at Theatre Cornell as we proceed with construction of our Performing Arts Center. It underscores our intention to serve as a developmental resource for new musical works for the American stage."

Composer Feigin collaborated with Jaime Manrique to create the libretto for "Mysteries of Eleusis. The set designer is Dick Block. Costumes will be designed by Marie Anne Chiment. Michael Baumgarten is the lighting designer.

Tickets are available at Theatre Cornell Box Office in 101 Willard Straight Hall from 1 to 6 p.m. Mondays through Fridays, 11 a.m. to 3 p.m. on Saturdays, and one hour before all performances. Special group rates are available. For reservations and information call 255-5165.

Novelist Fuentes to Lecture on Borges

Novelist Carlos Fuentes will give a public reading and lecture here Wednesday, April 2, on a new work he has written about Argentinean author Jorge Luis Borges.

The event, free to the public, will begin at 4:30 p.m. in Room 120 of Ives Hall. The work is titled "Borges in Action: A Narrative Homage."

Fuentes is at Cornell this spring as a senior fellow of the Society for the Humanities. He has been conducting a series of lectures — given Mondays at 2:30 p.m. in Hollis E. Cornell Auditorium of Goldwin Smith Hall — on the theme "Latin America and the West: Historical Origins and Cultural Contexts."

His weekly lectures, which will continue through the end of the semester, are open to the community.

The former Mexican diplomat and world-

renowned author wrote in opposition to President Reagan's support of the Nicaraguan Contras in an essay appearing in the March 3 issue of Newsweek.

A severe critic of both this country and his own, Fuentes often quotes the dictator Profririo Diaz: "Poor Mexico. So far from God and so close to the United States!"

His latest book, "The Old Gringo," tells the story of an American writer in 1914 Mexico and of the cultural conflict between the two countries.

Born in 1928, Fuentes is regarded as Mexico's greatest living novelist. He has resided in the United States for the past several years. Included among his books, which are widely translated, are "Terra Nostra," "The Good Conscience," "Aura," and "Hydra Head."

Polymers

Continued from Page 1

and to emphasize more basic research in the field.

"This grant is part of a resurgence and a unification of polymer chemistry at Cornell," according to Roald Hoffmann, the John A. Newman Professor of Physical Science and Nobel laureate (1981) in chemistry. One of two principal investigators in the new program, Hoffmann pointed to a long tradition of polymer chemistry at Cornell, beginning with Albert W. Laubengayer's studies in the 1930s of boron and germanium for use in glass.

Peter J.W. Debye, one of the founders of modern polymer chemistry and physics, developed the light-scattering method of measuring the molecular weight of polymers while at Cornell. Among the polymer scientists Debye brought to Cornell in the 1940s and 50s was Paul Flory, who conducted much of his Nobel Prize-winning work in Cornell University's Department of Chemistry.

William T. Miller, a Cornell chemistry faculty member since 1936 and now a professor emeritus, was responsible for two of the first commercially successful, totally synthetic organic polymers. Harold A. Scheraga, the Todd Professor of Chemistry at Cornell and co-principal investigator in the IBM grant, has been conducting studies of proteins for nearly 40 years.

Despite intensive research by industry, much remains to be learned about polymers, according to Hoffmann. "Industry researchers often are driven by production imperatives — to get a process working cheaper than anyone else — and occasionally they neglect some of the basic aspects of polymer science. Universities can look deeply at both the chemical and physical actions that are involved in polymer formation and that give polymers their interesting properties."

"We are now pushing the limits of what

polymers can do," said Kenneth D. Gibson, a senior research associate with Scheraga and one of the planners for the new polymer science program. "There is a need for people to sit down and think and experiment and devise new ways for putting polymers together."

"One of the aims of industry is to replace metals with polymers in many applications," Gibson said. "Polymers can be stronger — on the basis of weight — and more permanent; it is necessary to have academic research exploring some of the basic properties. We don't know enough to predict accurately which new polymer will fail and which won't. The chemical industries are doing a great deal of that research; they are the people who want chemists trained in polymer science."

Besides teaching new courses in polymer science, a new senior faculty member will supervise post-doctoral research associates and graduate research assistants. After the five years of IBM funding, Cornell is committed to continuing support of the polymer program.

Among the equipment to be acquired for the new program will be solid-state nuclear magnetic resonance, electron spin resonance, and high-performance liquid chromatography apparatus. That equipment, to be used for determining the composition and the molecular and atomic structure of materials, will be accompanied by computing equipment for gathering and analyzing data.

Correction

An article in the March 20 Chronicle on the work of C.L. Tang, professor of electrical engineering, incorrectly defined "femtoseconds." Tang's lasers produce pulses in tens of femtoseconds (or hundredths of trillionths of a second). A femtosecond is a quadrillionth (or a thousandth of a trillionth) of a second.

Number 12

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.

March 27, 1986

*Position: Secretary, GR18
Department: Cooperative Extension Administration
Description: Maintain a central office for a Cornell plot program focused in industrial engineering and which draws on primary subject matter knowledge resources in engineering sciences and processes. 50%: secretary in the office of Corporate Relations in the College of Engineering - type; answer phone; maintain files; handle travel and appointment schedules. Other duties as assigned.
Requirements: H.S. diploma or equivalent. Medium typing. Minimum 2-3 years of office experience. Excellent typing skills.
Minimum Biweekly Starting Salary: \$418.85
Job Number: C122

*Position: Circulation Assistant, GR16 (Repost)
Department: Circulation - Olin Library
Description: Inspect knapsacks, briefcases, books, etc., of exiting patrons when security alarm sounds; answer general questions and perform a variety of clerical duties as assigned; perform a variety of clerical duties when not at security desk including preparing bills for overdue fines, book replacements and bills for collection agency and Bursar; assist with weekly overdue notices.
Requirements: H.S. diploma or equivalent. Medium typing. Some office experience helpful. Ability to work with a variety of people in a public service situation. Excellent organizational and interpersonal skills.
Minimum Biweekly Starting Salary: \$378.73
Job Number: C0412

Position: Administrative Aide, GR20
Department: Center for Radiophysics and Space Research (CRSR)
Description: Provide administrative assistance support to the principal and co-investigators of a large scale research program. Handle correspondence; answer inquiries (on phone and in person); assist in report and proposal preparation; schedule meetings and conference calls; make travel arrangements; handle other projects as assigned.
Requirements: Associate's degree or equivalent. Some technical/science courses highly desirable. Medium typing. Minimum 2-3 years of secretarial or administrative experience. Familiarity with administration of government grants and contracts. Excellent organizational, interpersonal and communication skills.
Minimum Biweekly Starting Salary: \$468.29
Job Number: C118

Position: Administrative Aide, GR20
Department: Johnson Graduate School of Management (JGSM)
Description: Plan and execute administrative functions for programs such as major alumni and corporate luncheons and dinners around the country (e.g., Distinguished Alumni Speaker Program, International Reunion Program). Design and coordinate direct mail programs (3,000 pieces); monitor and process the financial aspects related to programs.
Requirements: Associate's degree or equivalent. Heavy typing. Minimum 1-3 years of administrative or secretarial experience. Strong communication, interpersonal, organizational skills. Familiarity with fund raising and computers helpful.
Minimum Biweekly Starting Salary: \$468.29
Job Number: C114

Position: Secretary, GR18
Department: Plant Breeding and Biometry
Description: Type technical manuscripts, course materials and correspondence for faculty in Biometrics Unit using word processor; answer telephone; run photocopier; process orders for publications.
Requirements: H.S. diploma or equivalent. Medium typing. Several years of typing experience. Word processing experience desirable. Ability to work independently.
Minimum Biweekly Starting Salary: \$418.85
Job Number: C116

Position: Secretary, GR18
Department: History
Description: Type and edit historical manuscripts as well as routine correspondence and various typing assignments in History Office. S. diploma or equivalent. Business or secretarial school desirable. Heavy typing. Minimum 1-3 years of experience. Excellent typing skills. Knowledge of word processing. Strong interpersonal communication skills.
Minimum Biweekly Starting Salary: \$418.85
Job Number: C115

Position: Special Collections Assistant, GR18
Department: NY Historical Resources Center - Olin Library
Description: Edit and index data gathering forms for statewide Historical Documents Inventory. Enter data into RLIN database; proofread printouts; update database and prepare material for publication. Full-time unit 6/30/87 with possible extension.
Requirements: Associate's degree or equivalent; Bachelor's degree in humanities, social sciences or related field preferred. Light typing. Writing skills and good handwriting. Experience in editing, indexing, proofreading and data entry desirable. Accuracy and ability to do detailed work with a minimum of supervision required. Some knowledge of NYS history desirable. Experience with RLIN desirable.
Minimum Biweekly Starting Salary: \$418.85
Job Number: C113

Position: Office Assistant, GR18
Department: Statler Inn
Description: Responsible for answering all telephone and inquiries; maintain files and records; word processing for the Personnel Manager of Statler Inn and for the Purchasing Department of the Statler Inn and the School of Hotel Administration.
Requirements: H.S. diploma or equivalent. Business or secretarial school desirable. Medium typing. Minimum 1-2 years of secretarial experience. Strong communication and interpersonal (written and oral) skills. Knowledge of Cornell helpful.
Minimum Biweekly Starting Salary: \$418.85
Job Number: C117

Position: Secretary, GR18
Department: School of Hotel Administration
Description: Provide clerical and receptionist support to nine Hotel School faculty and administrative aide. Type moderately complex materials such as charts, exams, forms, correspondence and class materials. Monitor approximately 65 student time cards. Maintain confidential files and Vends, Campus Store and Statler Club cards. 9 month appointment.
Requirements: H.S. diploma or equivalent. Business or secretarial school desirable. Medium typing. Minimum 1-3 years of office experience. Good interpersonal and communication skills. WANG word processor skills preferred, or willingness to learn.
Minimum Biweekly Starting Salary: \$418.85
Job Number: C112

Position: Word Processor Operator, GR18
Department: Agricultural Economics
Description: Word processor operator to work in a small group environment. Maintain files; coordinate mailings; arrange travel; transcribe dictation; provide back-up for other support people; other duties in support of research and extension program, e.g., library work or data collection.
Requirements: H.S. diploma or equivalent. Business or secretarial school desirable. Heavy typing. Strong interpersonal and communications skills to work in a team environment. Strong secretarial and typing skills essential. Good writing and arithmetic skills. Thoroughness and attention to details are essential.
Minimum Biweekly Starting Salary: \$418.85
Job Number: C123

Position: Accounts Assistant, GR19
Department: Controller's (Accounting)
Description: Audit payment vouchers for adherence to university regulations; resolve problems with vouchers which do not adhere to university guidelines; advise university personnel of policies and procedures pertaining to payments; compute moving allowances for prospective Endowed college employees; prioritize payment vouchers to assure that checks will be written and available at the time required.
Requirements: Associate's degree or equivalent in accounting. Ability to work under pressure and enforce regulations in a tactful manner. Excellent communication skills essential.
Minimum Biweekly Starting Salary: \$443.78
Job Number: C125

Position: Data Entry Operator, GR19
Department: Cornell Computer Services
Description: Key enter or key verify data via keystations. 39 hours per week, shift work, weekends.
Requirements: H.S. diploma or equivalent. Medium typing. Data entry and/or keypunch experience, preferably CADE system experience, at least 2-3 years.
Minimum Biweekly Starting Salary: \$443.78
Job Number: C121

Position: Senior Interlibrary Services Assistant, GR18
Department: Access Services - Olin Library
Description: Duties include inputting borrowing requests, lending reports into RLIN; running New York State Interlibrary Loan (NYSILL) computer program; searching and preparing special order requests which includes all non-Xerox photoreproduction; acting as departmental contact for accounting-related activities such as billing problems and payroll. Other duties as assigned.
Requirements: Associate's degree or equivalent. Light typing. Organizational skills. Ability to work under pressure. Previous library or office experience desirable. Experience with RLIN, OCLC or PC desirable.
Minimum Biweekly Starting Salary: \$418.85
Job Number: C124

Position: Building Coordinate Department: Dean's Office - Arts and Sciences
Description: Coordinate the care and maintenance of Uris Hall including key control, equipment, distribution and sorting of mail, issue and perform preventive maintenance and instruction on A/V equipment, supervise 1-2 work study students and order building supplies.
Requirements: H.S. diploma or equivalent. 2-3 years knowledge of or experience with electrical and mechanical equipment. Proven administrative ability. Ability to work with faculty, staff and students essential. Familiarity with Cornell helpful.
Minimum Biweekly Starting Salary: \$443.78
Job Number: G124

General Service

*Position: Building Coordinate Department: Dean's Office - Arts and Sciences
Description: Coordinate the care and maintenance of Uris Hall including key control, equipment, distribution and sorting of mail, issue and perform preventive maintenance and instruction on A/V equipment, supervise 1-2 work study students and order building supplies.
Requirements: H.S. diploma or equivalent. 2-3 years knowledge of or experience with electrical and mechanical equipment. Proven administrative ability. Ability to work with faculty, staff and students essential. Familiarity with Cornell helpful.
Minimum Biweekly Starting Salary: \$443.78
Job Number: G124

Please Post

Cornell University is an equal opportunity, affirmative action employer.

Job Opportunities

New Statutory Salaries become effective March 27, 1986.

Administrative/Professional

The minimum salaries listed are for recruitment purposes only.

*Position: Director, Computer Facility
Department: Chemistry
Description: Manage the technical and business aspects of the Chemistry Research Computing Facility. Act as an information source for department members on computer-related issues including micros and the use of other university computer resources.

Requirements: Bachelor's degree in computer science or equivalent. At least two years of systems programming experience in a minicomputer environment. Knowledge of C, FORTRAN, and PL/1. Experience with UNIX and scientific programming is preferred. Please send cover letter and resume to Earl Peters, 122 Baker Lab.
Job Number: PT127

*Position: Systems Programmer III
Department: Theory Center
Description: Provide UNIX systems support for various Theory Center computers; develop, distribute and maintain UNIX software to provide easy access to the Supercomputer Facility for local and remote users.

Requirements: Bachelor's degree in computer science. 3-4 years of experience with 4.2BSD UNIX; experience with various machine architectures; strong interpersonal and communication (written and oral) skills. Please submit cover letter and resume to Cynthia Smithbower.
Job Number: PT123

*Position: Residence Director II (Town House Director)
Department: Residence Life
Description: Assumes primary program and related administrative duties for town house community of 300 upperclass students. Recruits, trains and supervises student staff. Works closely with Faculty-in-Residence, residents and staff to implement student and community development objectives set by community and the Department of Residence Life. Live-in position with furnished apartment provided.

Requirements: Master's degree or equivalent strongly preferred. Bachelor's degree in higher education, community resource development or closely related field required. Experience with student residences, community development, counseling and administration expected. Please send cover letter and resume to Ralph D. Jones by April 10, 1986.
Job Number: PA124

*Position: Executive Staff Assistant I
Department: Division of Nutritional Sciences
Description: Provide administrative support for 5 year program. Write program materials and reports; compose correspondence; arrange meetings and symposiums; coordinate daily operations under the leadership of the Director. Word processing and data base work on microcomputer. Full-time, regular for 5 1/2 years.

Requirements: Bachelor's degree or equivalent combination of education and experience. Minimum five years of relevant experience including administrative responsibility. Excellent writing skills essential. Familiarity with IBM-PC helpful. Please send cover letter, resume and writing sample, or call in confidence, to Esther L. Smith by April 11, 1986.
Minimum Biweekly Starting Salary: \$522.60
Job Number: PC121

*Position: Budget Analyst II
Department: College of Agriculture and Life Sciences (CALS), Dean's Office, Administrative Services
Description: This individual will report directly to the Director of Administrative Services and assist in the development, execution and financial management of college and departmental budgets.

Requirements: Bachelor's degree in accounting or business administration or equivalent education and experience. Experience in budgeting. Good oral and written communication skills. Working knowledge of microcomputers essential. IBM-PC-AT experience with LOTUS 1-2-3 and familiarity with Cornell budget process desirable. Please send cover letter and resume, or call in confidence, to Esther L. Smith by April 11, 1986.
Minimum Biweekly Starting Salary: \$522.60
Job Number: PC128

Position: Director of Financial Operations for Public Affairs

Department: Vice President for Public Affairs
Description: Responsible to the Vice President for financial management, budgeting, long-range planning and personnel affairs. Provide direction to departments in budget preparation, prepare divisional budget and financial reports, monitor financial performance. Work with Director of Development to analyze gift support and make revenue projections.

Requirements: Bachelor's degree; M.B.A. preferred. 5-7 years of experience in budgeting, financial analysis, personnel. Good communication skills. Please send cover letter and resume to Ralph D. Jones by April 3, 1986.
Job Number: PA122

Position: Assistant to the Vice President for Public Affairs (Repost)

Department: Vice President for Public Affairs
Description: Assists the Vice President in overall coordination of Public Affairs Programs. Coordinates the divisional level volunteer recruitment, training and development with a special focus on women and minorities. Researches, writes reports, handles variety of special projects.

Requirements: Bachelor's degree or equivalent. Strong communication skills, especially written, required. Experience in Public Affairs or related field helpful; experience working with volunteers desirable. Please send cover

letter and resume to Ralph D. Jones by April 3, 1986.
Job Number: PA4612

Position: Technical Coordinator
Department: Systems Office - Olin Library
Description: Under direction of Project Leader, provide technical support to Library automation efforts, particularly regarding microcomputer applications; support includes microcomputer hardware and software needs as well as communications (network) help with various mainframe computers; individual will be involved in training and education of library staff in the use of computers.

Requirements: Bachelor's degree or equivalent. Microcomputer experience, both Apple Macintosh (Microsoft Word, EXCEL) and IBM PC (WordPerfect, dBase III). Excellent oral and written communications skills; knowledge of IBM mainframe a plus. Training experience helpful. Please submit cover letter and resume to Michele Dr. aiss, 235 Olin Library.
Minimum Biweekly Starting Salary: \$543.50
Job Number: PT111

Position: Retail Manager II, Text Books
Department: Campus Store
Description: Responsible for all retail operations, supervision, buying (course books), inventory control, merchandising, budget preparation and management, vendor and customer relations for the text book area. Primary liaison to faculty.

Requirements: Bachelor's degree or equivalent education and experience. 5-7 years successful experience in the text book field. Experience must have included supervision of full-time staff. Please send cover letter and resume to Ralph D. Jones by April 3, 1986.
Job Number: PA112

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 helpful. 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.
Job Number: PA2814

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. Please send letter and resume to Ralph D. Jones by April 4, 1986.
Minimum Biweekly Starting Salary: \$543.50
Job Number: PA1013

Position: Residence Hall Director - Risley
Department: Residence Life
Description: Train, supervise and evaluate a part-time program assistant and four Resident Advisors. Insure implementation of sound developmental and educational programs. Assist with policy development and administrative functions in a hall of 200 residents with specific interests in the fine and performing arts. Live-in position with furnished apartment provided.

Requirements: Bachelor's degree and substantial experience required. Master's degree strongly preferred or equivalent experience in higher education administration, student personnel, counseling or a closely related field. Experience in counseling, training, supervision, leadership, group facilitation, programming, general administration; some budgeting experience with effective written and oral communications skills. Residential and arts management experience. Please send cover letter and resume to Ralph D. Jones.
Minimum Biweekly Starting Salary: \$543.50
Job Number: PA091

Position: Residence Hall Director (Two Positions)
Department: Residence Life
Description: Assumes primary program and related administrative duties for a residence hall unit of 200-500 students. Supervise 4-14 Resident Advisors and 1 Program Assistant. Live-in position with furnished apartment provided.

Requirements: Bachelor's degree required. Master's degree or equivalent strongly preferred. Degree in student personnel administration, counseling or a closely related field necessary. Some experience in student housing ad-

ministration, programming, staff training and supervision highly desirable. Please send cover letter and resume to Ralph D. Jones.
Minimum Biweekly Starting Salary: \$543.50
Job Number: PA092

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: 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

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

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

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

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

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

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.
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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.
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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

***Position: Material Handler, SO19**
 Department: General Stores - Endowed
 Description: Responsible for complete spectrum of warehouse duties including receiving, order picking, distribution, wai customers and general housekeeping. 7:30 a.m. - 4:00 p.m. Monday through Friday.
 Requirements: H.S. diploma or equivalent. NYS driver's license (Class V) required. 1-2 years of related warehouse or retail experience. Good interpersonal skills. Familiarity with trades (plumbing, electrical, etc.) terminology helpful.
 Minimum Starting Salary: \$5.74/hour
 Job Number: G121

***Position: Custodian, SO16**
 Department: Residence Life - Lower North Campus (Endowed)
 Description: Provide general custodial care such as changing light bulbs, cleaning high walls, windows. Record storage items and note maintenance problems. Monday - Thursday, 7:30 a.m. - 4:00 p.m.; Fridays 7:30 a.m. - 3:00 p.m.
 Requirements: H.S. diploma or equivalent. Ability to lift 50 lbs. and climb an 8 foot ladder. Good interpersonal skills for daily contact with students.
 Minimum Starting Salary: \$4.84/hour
 Job Number: G123

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 Smithbower. 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: Technician, GR21**
 Department: Plant Breeding and Biometry
 Description: Prepare various buffers and media, execute various protocols used in molecular biological research, order lab supplies as needed, possibly supervise undergraduate students working in lab. Monday - Friday, 12:00 noon - 8:30 p.m.
 Requirements: Bachelor's degree, preferably in biology, molecular biology, biochemistry or related area. Experience and/or training in biochemistry or molecular biology. Some lab experience desirable, preferably with recombinant DNA techniques. Apply by April 11, 1986.
 Minimum Biweekly Starting Salary: \$497.40
 Job Number: T122

***Position: Technician, GR20**
 Department: Veterinary Microbiology - James A. Baker Institute for Animal Health
 Description: Provide technical support in an infectious disease-oriented immunology laboratory. Will perform tissue culture and various immunological procedures such as ELISA, electrophoresis and affinity chromatography. Some animal handling (rats).
 Requirements: Bachelor's degree in biology, agriculture or equivalent. Some related laboratory experience desirable. Please submit cover letter and resume by April 11, 1986, to Cynthia Smithbower.
 Minimum Biweekly Starting Salary: \$468.29
 Job Number: T125

***Position: Technician, GR20**
 Department: Neurobiology and Behavior
 Description: Assist in the design and conduct of electrophysiological and behavioral research, and will aid in the administration of a small laboratory. The research program concerns electrophysiology of the lateral line system of tropical fishes and studies of communication behavior among tropical fish.
 Requirements: Bachelor's degree in some field of experimental biology. Master's degree desirable. Experience in a research laboratory environment. Familiarity with electrophysiological, neurobiological and animal behavior techniques. Excellent eye/hand coordination for hand work; skilled in the use of laboratory equipment and tools. Please submit cover letter, resume and copy of transcripts to Cynthia Smithbower.
 Minimum Biweekly Starting Salary: \$468.29
 Job Number: T124

***Position: Technician, GR20**
 Department: Animal Science
 Description: Milk cows, collect blood and milk samples and oversee large intensive three year experiment, input data on microcomputer, carry out biochemical laboratory-based, process tissue samples for microassay. Will be required to work with graduate students, undergraduates and faculty members.
 Requirements: Bachelor's degree in animal science necessary. Extensive experience in computers, radioimmunoassays, animal physiology and animal science. Apply by April 11, 1986.
 Minimum Biweekly Starting Salary: \$468.29
 Job Number: T123

***Position: Technician, GR18**
 Department: Plant Pathology - Long Island
 Description: Establish, maintain and collect data from field and greenhouse experiments on vegetable crops. Plant, fertilize and harvest crops, apply pesticides, rate plants for treatment effects. Record data from experiments. Analyze plant samples for plant pathogenic bacteria. Prepare and sterilize media, record population plates, assist in data summary and analysis. Until 12/31/86.
 Requirements: Bachelor's degree or equivalent in related subject area. Ability to do field work and training or experience in microbiology essential.
 Minimum Biweekly Starting Salary: \$418.85
 Job Number: T121

Position: Technician, GR20
 Department: Horticultural Sciences - Geneva, NY
 Description: Provide technical support in vineyard planting, maintenance and harvest operations in a project to evaluate new wine and table grape selections on a statewide basis. Assist in data collection and compilation. Input into computer files. Full-time until June 30, 1987.
 Requirements: Bachelor's degree in agriculture, plant science, pomology or related area preferred, or equivalent experience. Viticultural skills, farm experience and familiarity with computers for data collection and analysis preferred. Valid driver's license required.
 Minimum Biweekly Starting Salary: \$468.29
 Job Number: T111

Part-time

***Position: Administrative Coordinator**
 Department: The Learning Web
 Description: Half-time position responsible for grant writing, fiscal management and administrative duties.
 Requirements: Organizational and communication skills and previous experience necessary. Please submit resume and short statement expressing your views on youth and education by March 31 to: The Learning Web, 318 Anabel Taylor Hall, Ithaca, NY 14853. Job description available at same address.
 Job Number: P129

***Position: Secretary, GR17**
 Department: Sociology
 Description: Receptionist at main office. Answer tele-

phones and routine inquiries; type course work, correspondence and manuscripts. Other duties as assigned. Part-time, regular.
 Requirements: H.S. diploma or equivalent. Heavy typing. Some secretarial experience. Excellent interpersonal skills.
 Minimum Starting Salary: \$10,366/annual equivalent
 Job Number: C126

Position: Research Support Specialist I
 Department: Human Development and Family Studies
 Description: Provide support to Professor in research on Asian/American studies project. Library research; summarize, edit and evaluate pertinent literature; some fiscal monitoring; attend committee meetings and provide written summaries; maintain records. Part-time, regular until 6/30/87.
 Requirements: Bachelor's degree or equivalent combination of education and experience. Minimum 2-3 years of experience in position requiring evaluation and editing of written materials. Administrative experience helpful. Please send cover letter and resume to Esther L. Smith by March 31, 1986.
 Job Number: PC114

Position: Technical Sales Assistant, GR17
 Department: Campus Store
 Description: Sell computer manuals, software and supplies. Maintain accurate inventory and assist in development and implementation of computer sales and inventory system. Operate computerized cash register. Other duties as assigned. Monday - Friday, 8:30 a.m. - 12:30 or 1:00 p.m.; Saturdays 10:00 a.m. - 3:00 p.m.
 Requirements: Two years of college education or equivalent. Retail experience preferred. Ability to operate microcomputers such as IBM PC, DEC, Rainbow, Apple Macintosh, and demonstration of applicable software such as WordPerfect, Microsoft Word, Multiplan. Good communication and interpersonal skills. Apply in person at the East Hill Plaza Employment Office, Monday through Friday, 9:00 a.m. - 12:00 noon.
 Minimum Biweekly Starting Salary: \$255.00
 Job Number: G112

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 opportu-

nities, please call Laurie Worsell at 255-5226.
Position: Temporary Collection Representative (Two Positions)
 Department: Bursar
 Description: Perform duties involved in the collection of delinquent student loan accounts. Duties include researching student loan accounts, 'skip tracing', initiating telephone and written communication with delinquent loan accounts, making suitable repayment arrangements with delinquent borrowers. Tuesday, Wednesday, Thursday, 4:30 p.m. - 8:30 p.m.
 Requirements: H.S. education or equivalent. Ability to effectively communicate via the telephone and letter. Person must be self-assured and possess the maturity to effectively present the University's position with diplomacy and tact. Please send cover letter and resume to Esther L. Smith by April 4, 1986.
 Job Number: C111

Academic

Please contact department directly.
***Position: Director, NYS Agricultural Experiment Station, Geneva, NY/Associate Director for Research of the College of Agriculture and Life Sciences, Ithaca, NY**
 Department: Agricultural Experiment Station/Office for Research, College of Agriculture and Life Sciences
 Contact: N.R. Scott, Director, Office for Research, 292 Roberts Hall
 Job Number: A121

***Position: Extension Associate III - IPM Implementation Specialist, Hudson Valley Laboratory**
 Department: Integrated Pest Management, NYS Agricultural Experiment Station (Hudson Valley), NYS College of Agriculture and Life Sciences
 Contact: James P. Tette, Leader, IPM Support Group, NYS Agricultural Experiment Station, Geneva, NY
 Job Number: A122

***Position: Extension Associate III - IPM Implementation Specialist, Long Island Horticultural Research Laboratory**
 Department: Integrated Pest Management, NYS Agricultural Experiment Station (Long Island), NYS College of Agriculture and Life Sciences
 Contact: James P. Tette, Leader, IPM Support Group, NYS Agricultural Experiment Station, Geneva, NY
 Job Number: A123

***Position: Lecturer in Field Study/Coordinator of Pre-Field Preparation, Human Ecology Field and International Study Program**
 Department: College of Human Ecology
 Contact: Dwight E. Giles, Director, Field and International Study Program, College of Human Ecology
 Job Number: A124

***Position: Lecturer in International Study/Coordinator Study Abroad**
 Department: College of Human Ecology
 Contact: Dwight E. Giles, Director, Field and International Study Program, College of Human Ecology
 Job Number: A125

***Position: Director, Cornell Nutritional Surveillance Program (Senior Research Associate II, CAO8)**
 Department: Division of Nutritional Sciences, College of Agriculture and Life Sciences and College of Human Ecology
 Contact: Dr. J.P. Habicht, Division of Nutritional Sciences, Cornell University, Ithaca, NY
 Job Number: A126

Position: Assistant Professor, Systems Physiologist
 Department: Physiology, NYS College of Veterinary Medicine
 Contact: Dr. R.H. Wasserman, Chairman, Department of Physiology, NYS College of Veterinary Medicine, Cornell University, Ithaca, NY 14853
 Job Number: A111

Position: Temporary Professorial Level (Board Certified Internist)
 Department: Clinical Sciences - NYS College of Veterinary Medicine
 Contact: Dr. A. deLahunta, Chairman, Dept. of Clinical Sciences, NYS College of Veterinary Medicine, Cornell University, Ithaca, NY 14853
 Job Number: A112

Position: Professorial Level Faculty
 Department: Pharmacology - NYS College of Veterinary Medicine
 Contact: Dr. Geoffrey W.G. Sharp, Dept. of Pharmacology, NYS College of Veterinary Medicine, Cornell University, Ithaca, NY 14853
 Job Number: A113

Position: Extension Associate III (Curriculum Designer -Elementary Science)
 Department: Cornell Plantations
 Contact: Julie Shattuck, Cornell Plantations, One Plantations Road, Ithaca, NY 14850 - (607) 255-9865
 Job Number: A114

Olin Hall, Chemical Engineering Building, Faces Major Renovation

Gifts of \$1 million from Eastman Kodak Co. and \$300,000 from the Amoco Foundation Inc. will help fund renovations to Olin Hall, the chemical engineering building in the College of Engineering.

Renovations to the east wing of Olin Hall, the oldest of the 10-building engineering complex at Cornell, will cost \$4.9 million. The east wing project is the first of several phases planned to modernize the building.

"Modernization of Olin Hall, which was built in 1941 for undergraduate education, will allow us to confront the rapid and dramatic changes in the tools and techniques of teaching and research," said Keith E. Gubbins, director of the School of Chemical Engineering.

"The redesigned building will accommodate expansion of our research program, and will provide the flexibility needed to incorporate new technologies."

"In many respects, we view the contribution to the chemical engineering program at Cornell as an investment in our own future," said Colby H. Chandler, chief executive officer of Eastman Kodak Co.

"Kodak's strength as a company largely is based on the skills of those who graduate from fine universities like Cornell. Thus we feel compelled to work with universities to ensure that their continuing efforts will help us to fill our future needs for highly qualified, technically educated men and women."

"Our board and many individuals in Amoco Corp. have the highest regard for Cornell's chemical engineering depart-

ment," said H. Laurance Fuller, president of the Amoco Foundation. "We understand the need for new and renovated space as the graduate education and research program has grown in the past decade."

Most noticeable among the Olin Hall renovations will be the conversion of its open "high bay" area to three floors of laboratories and offices. The high bay, which no longer serves the needs of a modern chemical engineering program, will make way for teaching and research space in the fields of thermodynamics, fluid mechanics, polymers, kinetics, and catalysis.

At one time, the high bay area housed teaching equipment on the scale found in the petro-chemical industry, such as large distillation columns. While some space in the renovated Olin Hall will be reserved for the tall, classical experiments, more compact and better designed and instrumented equipment for the school's broadened curriculum will occupy most of the laboratory space.

In addition to 19,300 square feet of new laboratory space, Olin Hall's east wing will get a new roof, windows, elevator, utilities, and offices for graduate students.

The Eastman Kodak gift brings to \$2.8 million the company's support to Cornell. The Amoco Foundation gift brings Amoco's support to nearly \$600,000.

Olin Hall is named for Franklin W. Olin, Jr., the son of Franklin W. Olin, who earned a degree in civil engineering from Cornell in 1886 and provided \$685,000 for the original building through the Olin Foundation.

Arecibo Gets \$324,000 Grant

Harris Corp. of Fort Lauderdale, Fla. has awarded Cornell University \$324,000 in computer hardware and software for the Arecibo Observatory in Puerto Rico.

The H1000 computer system will provide the scientific staff at the observatory and visiting researchers with expanded capabilities for analyzing data collected by the telescope, according to Donald B. Campbell, director of operations for the observatory. The telescope, whose reflector is 1,000 feet in diameter, has the largest collecting area of any instrument of its kind.

Arecibo Observatory is the principal facility of the National Astronomy and Ionos-

phere Center, which is operated by Cornell University under contract from the National Science Foundation.

The observatory is available to researchers around the world in the fields of radio and radar astronomy and atmospheric sciences.

Cambell said the Harris H1000 supports more than 40 interactive terminals, 1.4 gigabytes of on-line disk storage, eight tape drives, an FPS5210 array processor, and X.25 communication to a Harris H800 and to a public packet switching network. The H800 is the main data acquisition computer at Arecibo Observatory.

Barton Blotter

Sixteen thefts with losses set at \$2,133 in cash and valuables were reported on campus, according to the morning reports of the Department of Public Safety for March 17 to 23.

Six of the thefts were of cash totaling \$139; \$5, Barton Hall; \$60, Large Animal Clinic, \$6, Mann Library; and \$30 and \$13 from University Hall No. 2; and \$25 from a room in Baker Laboratory.

Other thefts on campus included \$110 in text books taken from Rand Hall; a \$290 radar detector stolen from a car in North Parking Lot of the West Campus dormitories; stereo equipment va-

lued at \$280 taken from a car in the Anabel Taylor Hall parking lot; a \$200 movie projector stolen from Goldwin Smith Hall; a \$375 computer external drive removed from Statler Hall; and six wooden chairs worth \$150 taken from Risley Hall.

Four persons were referred to the judicial administrator on charges of forgery, reckless endangerment, criminal mischief, and disorderly conduct.

Gerard R. Clinton of 124 Triphammer Rd., Ithaca, was charged with driving while intoxicated.

Oil Prices

Continued from Page 1

tries in the Middle East alone hold 420 billion barrels, Chapman says. In addition to the 700 billion barrels existing in proven world reserves, geologists estimate about 500 billion barrels of oil have not yet been discovered, he adds. At least half of the 500 billion barrels of oil will be tapped from OPEC's Middle East countries.

"From those figures, it is easy to understand why OPEC's current weak status is only temporary," Chapman says.

OPEC consists of Algeria, Equador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

The majority of non-OPEC oil is produced in Alaska, Texas, and other parts of the United States, as well as in Mexico and the North Sea.

Predicting the future oil prices and supplies is an inexact science at best, Chapman says, because the world oil market is dependent on several unpredictable variables, such as Mideast politics, wars, the development of new fuel supplies, levels of consumption, and conservation efforts.

If one looks at the larger picture, though, the future of oil prices and supplies becomes clear, Chapman says.

"Today, the oil cartel is in a state of collapse, and oil prices are relatively low. However, there are finite reserves of oil, and when those reserves become scarce, OPEC will be holding all of the cards. Eventually, the price of oil and other petroleum products will climb past the level that the average consumer can afford to pay," he warns.

Crop Society Elects 3 Cornellians Fellows

Three Cornell University scientists have been elected fellows of the Crop Science Society of America.

They are William D. Pardee, professor of plant breeding; Royse R. Murphy, professor emeritus of plant breeding; and Neal F. Jensen, the Liberty Hyde Bailey Professor of plant breeding, emeritus, all in the College of Agriculture and Life Sciences. They were honored at the CSSA's annual meeting in Chicago for their professional accomplishments in the field of crop science and for their services to the national organization.

Pardee, chairman of Cornell's Department of Plant Breeding and Biometry, is a specialist in field crops and is recognized as an authority on production and use of field crop seeds.

Murphy is the developer of several superior varieties of alfalfa and other forage crops; his varieties have greatly benefited agriculture in the Northeast.

Jensen is recognized internationally as one of the leading plant geneticists and a pioneer in the methodology of plant breeding. He has developed 20 new varieties of wheat, oats, and barley, which have helped New York and other states in the Northeast boost their grain productivity over the past four decades.

The Week in Sports

By JOHN HERON
Sports Information

As March gives way to the warmer temperatures of April this week, the Cornell spring sports schedule is in full swing. Three Red teams are at home, including two squads competing in their home openers of the season.

In its season debut, the women's lacrosse team will open its Ivy League slate against Yale at 1 p.m. Saturday on Schoellkopf Field. The Big Red will also play Ithaca College at home at 3:30 p.m. Tuesday. After opening its season on the West Coast, the baseball team will be home for the first time against Hobart at 3:30 p.m. Wednesday.

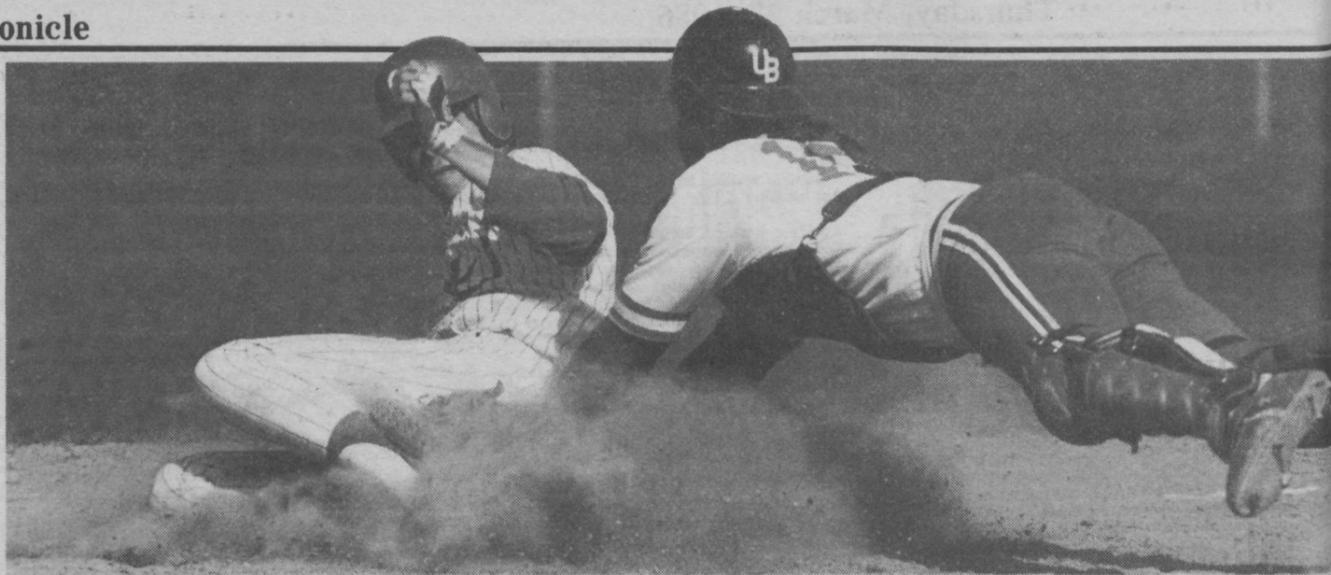
On Wednesday, the men's lacrosse team will be host to the University of Massachusetts at 3:30 p.m. at Schoellkopf Field.

Elsewhere on the road this week, the women's lacrosse team, in Florida for a week of training, will play Denison Thursday in an exhibition game in St. Petersburg before returning to Ithaca to kick off its Ivy campaign. The baseball team has games against Wisconsin and California scheduled for Friday and another against Notre Dame on Saturday. All three contests are part of the Riverside Tournament.

The men's and women's tennis teams will also be rounding out their West Coast trip. The women's squad meets the University of Nevada-Reno in La Jolla on Friday and plays Cal State-Fullerton Saturday before coming home. Meanwhile, the men's team will be at the University of California-Irvine to face its team and Nevada-Las Vegas on Saturday.

On Friday, the men's track team will be at Navy to compete against the Midshipmen, Rhode Island and LaSalle. Saturday the women compete against Navy and Delaware. That same afternoon, the men's lacrosse team will play at the University of Maryland-Baltimore County.

The Big Red laxers are coming off a southern swing in which it played two games in the Baltimore area. Cornell lost its first Ivy League matchup last Saturday when Harvard rallied to post a 10-7 victory. In that



First baseman Mark Smith slides in a game against the University of Buffalo in 1984.

Spring Sports in Full Swing; Squads Open at Home

game, seven different Big Red players scored, including senior Dan Boltja with one goal and two assists, and Bill Hughes and Jack Beaney with one goal and one assist each. Hughes leads the team in scoring with five goals and five assists. He is followed by senior midfielders Tom Gundersen (4-4-8) and Tony Reece (6-0-6), the top goal scorer on the squad. Beaney's goal was his first at Cornell.

Freshman goaltender Paul Schimoler continues to play steadily in the nets. He made 12 saves against the Crimson and has a .646 save percentage in three games. Schimoler has allowed an average of just 8.9 goals per game this year.

Head coach Cheryl Wolf will lead the women's lacrosse team into its 1986 Ivy League campaign this weekend. The Red is expected to be much improved with a solid core of players returning. Cornell will be looking to improve on its 5-8-1 record of a year ago and 1-5 mark in the Ivies. Senior Jenny Graap, who won the team's best all-around player award for the last two seasons, is one of the returning offensive

threats. Graap was the Big Red's fourth-leading scorer (15-4-19) in 1985. She will be joined by senior Kate Howard-Johnson, the squad's top returning scorer (22-8-30) from a year ago, and sophomore Mary-Beth DeLaney (14-11-25). Senior Kim Foster and junior Lisa Kolongowski lend experience to the solid defensive corps. Senior Ellen Grant (9.9 GAA, .530 save pct.) is expected to return in goal. Newcomers Beth Paciello and Ellen

Graap, who both made major contributions in their first field hockey season last fall, are expected to be strong candidates on the crosse team as well.

The Big Red lost to Yale 17-2 in its first Ivy encounter last season. Cornell has not beaten the Elis in six previous meetings. Likewise, Ithaca College leads the series against the Big Red 11-5, but Cornell edged the Bombers 7-6 last season on South F.

Some very challenging competition will be met by the Big Red baseball team up for the 1986 Eastern Intercollegiate Baseball League season. Cornell lost two doubleheaders last week in San Diego before playing in the competitive Riverside Tournament. The Red lost two one-run games to Point Loma Nazarene College, 4-3 and 1-0 Saturday, then dropping a pair of games, 6-0 and 6-0 Eastern Connecticut on Friday. Cornell fell to 0-5 on the season with a 12-0 setback at the hands of Oregon State.

The Red has dominated the series with Hobart, 19-7-4, including last year's 6-2 triumph.



KATE HOWARD-JOHNSON

KIM FOSTER

Lacrosse

Brief Reports

Citizens Network Director To Give Talk Here Monday

Why do we have more than 11,000 strategic nuclear warheads if only a few hundred are needed to destroy the Soviet Union? What is the Committee on the Present Danger? Are they saving us from Communism or are they leading us down the path to nuclear war?

Joan Bokaer, executive director of the grass roots organization Citizens Network, will answer these questions in a talk at 4:30 p.m. Monday, April 7, in Ives 110. The talk is entitled "Nuclear Weapons: Who's in Charge?"

The talk is sponsored by Centerpeace and The November 11th Committee, Cornell's chapter of United Campuses to Prevent Nuclear War (UCAM).

Some Garden Plots Are Still Available

People who would like to garden this summer but don't have a place to put in one of their own can rent a plot for the season from the Cornell Garden Plot Committee.

Small plots, 500 square feet, are \$5; large plots, 1,000 square feet, are \$10. They are located in three places, near Cornell Quarters, on Ellis Hollow Road and off Hanshaw Road on the Warren Farm.

Send a stamped, self-addressed envelope to Cornell Garden Plots, PO Box 843, Ithaca, N Y 14851, or call Eileen Driscoll at 844-4535 after 10 a.m.

Presidential Breakfast Openings Are Available

Some openings are still available for Cornell students interested in having breakfast with President Frank Rhodes, according to his office staff.

The breakfasts are held from 7:30 to 8:30 a.m. in the Elmhurst Room of Willard Straight Hall at various times during the semester.

Reservations are made on a first-come, first-served basis. Students interested should call Rhodes' office at 255-5201 to make a reservation.

MicroVAX II Line Will Be Demonstrated

Representatives of Digital Equipment Corp. will demonstrate the MicroVAX II

product line in a product fair, sponsored by Cornell Computer Services, from 10 a.m. to 4 p.m. Wednesday, April 2, in the West Lounge of Statler Hall.

In the day-long Vaxstation II Product Fair, which is open to the public, technical specialists will offer informal product overview sessions. Hardware and software products, including networking options, advanced graphics, and office productivity solutions, will be featured.

Selected configurations of the Vaxstation II are currently available for purchase on campus at nearly 45 percent discount through the Network Communications section of CCS.

Fraternities to Sponsor 3 Bloodmobile Visits

Three visits of the American Red Cross Bloodmobile to campus will be sponsored during the first part of April by Alpha Phi Alpha, Zeta Psi and Sigma Alpha Epsilon.

All three will be from 10 a.m. to 3:45 p.m. and for all of them advance reservations can be made by calling the American Red Cross at 273-1900, or walk-ins will be accepted at the place of the visit.

Dates and places are:
Thursday, April 3, Robert Purcell Union, North Campus, first floor lounge.
Friday, April 4, Barton Hall.
Wednesday, April 9, One World Room, Anabel Taylor Hall.

The three sponsoring groups are aiming for a goal of 550 units of blood from the visits.

Museum Seeks Works By Christian Midjo

The Herbert F. Johnson Museum is planning an exhibition of works by Christian Midjo from May 29 to July 11.

Midjo was one of Cornell's first professors of art. He came to the United States from Norway and, in 1909, began teaching at Cornell. Upon retiring in 1946, he moved to California where he stayed for 16 years, then returned to Norway. He died in 1973.

The exhibition will include many of Midjo's paintings that have been located in this region. If anyone who owns a Midjo work has not been contacted by the museum, he or she is requested to get in touch with Gwendolyn Owens, curator of painting and sculpture, or Sharon Lindahl, graduate assistant. The museum phone number is 255-6464.

CCTS Applications Deadlines Announced

Deadlines have been announced for Children's Tuition Scholarships for this summer and next academic year.

Employees who are now receiving CCTS will automatically receive an application. All other employees who are applying for CCTS should request an application form University Personnel Services, 130 Day Hall, or call Adele Feierstein at 255-7509.

Deadlines for submission of applications are: Summer session, May 1; academic year 1986-87, June 1; fall term only, June 1; winter-spring term 1987, Dec. 1, 1986.

To assist in the process of applying for CCTS benefits, Employee Benefits section of University Personnel Services will sponsor an information session Monday, April 7, from 1:30 to 2:30 p.m. in Kaufmann Auditorium of Goldwin Smith Hall.

SAGE CHAPEL

Director of CURW Will Speak Sunday

The Rev. Robert L. Johnson, director of Cornell United Religious Work, will preach at Sage Chapel at 11 a.m. East Sunday, March 30. His sermon topic will be: "Easter: The Unburdening of Time."

Johnson is an ordained minister in the United Methodist Church and a graduate of the University of North Carolina at Chapel Hill, Union Theological Seminary in New York City, and Harvard Divinity School. For 18 years, he served as director of the Wesley Foundation at Chapel Hill, N C, and served in recent years as president of the National Institute for Campus Ministries.

Music for the service will be provided by Marion Hanson, soprano soloist, and Richard Neal, graduate student, as organ accompanist.

Weather Report Off to Fast Start Among CUINFO's Popular Items

In only its second month of operation, the weather report has become the most consulted item on Cornell's campuswide, computerized information service, CUINFO.

During February, WEATHER was called 1,515 times, compared to 1,468 times for COMPUTING, which provides schedules and other information concerning the university's main computer and related functions, and which had regularly led accessed items in the past.

The weather listing covers the local short-term and extended forecasts and is updated four times a day by the National Weather Service.

Several other new subjects have been

added to the bank of information. People wishing to donate blood can find the schedule of the Red Cross Bloodmobile by calling up BLOOD. A complete schedule of courses for the 1986 Cornell Summer Session is available by calling up SUMMSESS.

Two more CUINFO terminals have been added on campus, one at the circulation desk of Olin Library and the other at the reference desk of the ILR library. Other terminals are in the main lobby of Mann Library, the main entrance to Day Hall, and in the lobby of Gannett Clinic.

For more information, contact the Information and Referral Center in the Day lobby, 256-6200.

